

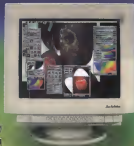
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## Intermedia Flashes Latest in Multimedia

BY PATRICK MCENENNA

**SAN JOSE, CA (MS) — Intermedia held its ninth annual multimedia show last month with 300 exhibitors and an estimated attendance of 16,000.**

Intermedia offers a look at multimedia through conferences, debates, seminars, parties, and an exhibitors show floor. The opening speakers from Lucasfilm addressed a standing-room-only crowd that participated in a question and answer session with George Lucas and the Lucas executives.

The show covered such topics as the "Information Superhighway" and multimedia development for computer wires, the development of new games "super" games video-on-demand home shopping, and the role of the entertainment industry.

On the show floor attention was drawn off to Sony's newly announced M10 three storage system, which offers 140 megabytes (MB) of storage on a 3.5-inch disk. These drives for notebooks and desktops were on exhibit, and from the response of the audience the crowd observed would have thought that the 1.44MB floppy also a Sony

invention, was approaching an end to its usefulness. The read and write disks will sell for under \$80. Sony has not entered prices for the drives yet and availability has not been announced.

Sony previously announced the MicroDisk format for audio with a new Walkman to match. Also on exhibit was "Coral," the black box, a technology ready and waiting for cable or a business agreement that will provide data for drivers' vehicles on the "Informationway."

Being a motorcycle down a 4-lane state, Bud Culligan, president and CEO of Intermedia, presented and introduced Discus 4.0, the latest version of its successful networking tool for multimedia production. Culligan of Vancouver unveiled Cinema 3D, Windows CD which claims to offer affordable tools for end-user multimedia applications.

During Kinship Publishing, an established publisher of books, unveiled their new member into the multimedia marketplace with the CD-ROM writer, based around the company's best-selling children's titles.

Some analysts argue that, while the dual speed CD-ROM drive remains the standard for most computer users, it seems that the triple speed 12x drives are nearly a viable product to the quadruple 4x speed drives. Several companies have bypassed the triple speed category and demonstrated the drives in the \$3,000 range.

In answer to the Newberg question "With all these developments and latest ideas for the next generation of hardware and software what would you say to the average computer user?" Randy Kinsman of Lucasfilm Entertainment said, "The answer is: Buy a CD-ROM drive, an online server and become part of a gaming world!" ■

### Letters

Continued from page 8

classic capabilities on top notch. The train in REXX language has much to offer. Again, to anyone who writes macros or REXX batch programs. Technical support is second to none.

No wonder many major corporations, including some Canadian banks and Vancouver's Strathairn, have moved to REXX.

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We are looking for details, there is always small water of course, but we would rather support a local dealer who doesn't want a mere endorsement. Some of them are beginning to catch on.

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Michael Marchand  
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# Selecting a Monitor

## The 10 Most Important Things to Know

BY BRIE JAMES

### Your Eye's Work Is as Good as Your Monitor

Your monitor more than any other part of your PC system will determine how well you work. The detail paid in by and the resolution you display on your computer monitor can be a complement and can fight back because there are so many choices and many to consider. Don't despair, however, (as real as

based on some cases as much as 12 inches total on the table).

### Maximize High Res with a Bigger Screen

Screen size becomes increasingly important as higher resolutions which allow you to get more information on the screen. The more information you can get on the screen, the easier that information appears and it will be very difficult to read if your monitor is too small. In order to fully enjoy the many advantages of high resolution, you need a large enough screen in the picture.

### Which Way Does It Lay? Landscape and Portrait Views

New show orientations by this we are referring to the position of the monitor. If you have been using PCs in a while, you are aware that the standard PC monitor is made then it is high. This horizontal orientation is referred to as "landscape" and it is suitable for working on spreadsheets or presentation graphics.

It is also useful, however, for word processing. A "portrait" is vertical orientation, combined with a high enough resolution allows you to see a full 8 1/2 x 11 inch page of text. This makes the need to scroll the text up and down.

## Resolution

Resolution can refer to at least three specific things: the bandwidth of the monitor, the dot pitch of the monitor and the resolution of the graphics adapter.

Bandwidth refers to a monitor's video capabilities and we are not going to deal with that other than to say that more bandwidth generally means better resolution in the monitor.

Dot pitch is a feature of the phosphors on the screen that affects resolution, but does not measure it.

Resolution is most accurately a feature of the graphics adapter — the on-board video in the separate graphics card in your computer. Graphics adapter resolution refers to number of columns of pixels, or dots, displayed across the screen and the number of rows of pixels displayed down the screen.

When you see the terms 800 x 600 resolution, it refers to a graphics adapter's capability to draw 800 pixels across the screen in 600 horizontal lines from top to bottom.

The higher the resolution, the more you'll be able to display on the screen.

### Dealing with the Highest Drop of Graphics Standards

Resolution is most often talked about in terms of certain standards the graphics industry has established. The only standards for VGA, DGA, and MCGA (the "GAs" in all those acronyms stands for "graphics array"

and the color letters stand the various terms VGA stands up each time they apply the same) have given way to the clear choice of VGA (which stands for the surprisingly logical "video graphics array", Super VGA, and the newest and can yet fully accepted label Extended VGA (EVOGA).

There are some high-end options for people with special needs, but unless you are doing professional publishing, VGA and SVGA are fine for (and) most graphics applications and it is becoming more widespread that SVGA and EVOGA is ideal for this.

So, is it just worry about the three that are most likely to have any impact on your monitor and purchase decision? VGA stands a resolution of 640 pixels across and 480 lines down the screen, commonly expressed "640 x 480". SVGA means a resolution of 800 x 600 and we're going to go ahead and use EVOGA to represent a resolution of 1,024 x 768. All of these resolutions refer to the pixel arrangement in a standard rectangular monitor.

The more pixels, the more you can fit on the screen. Because the pixels in each column are closer together at a higher resolution than they are at a lower resolution, the high resolution results in smoother characters.

## Dot Pitch

### How Big Is That Pixel in the Window?

The size of a monitor's pixels — the individual picture elements used to form the display — is gauged by the dot pitch. Monitor manufacturers place phosphors in groups of three and the dot pitch is the distance between two like-colored phosphors in adjacent pixels.

Typical dot pitches measure from 0.24 mm to 0.34 mm. The smaller the dot pitch, the closer and closer the picture.

Exactly what pixel you need for a resolution depends on the screen size. Putting more dots on a smaller screen requires a tighter pitch. For monitors 15 inches or smaller, 0.28 mm is generally considered the practical minimum. Monitors 16 inches or larger should have a dot pitch of 0.31 mm or smaller. Some additional selected VGA compatibility but have dot pitches as high as 0.34 mm. Non-15 inch, such as some 17-inch screens, tend on your eyes.

## Refresh Rate and Line Scan Rate

### How Quick on the Draw Is Your Monitor?

Monitors draw pictures over horizontal lines at a time, going from the top to the bottom. The horizontal row rate (also called the line scan rate, the horizontal frequency or horizontal scanning frequency) is a measure of



*Idtek, Ryerson's Multifast series feature a 21-inch screen with dot pitches ranging from .26 mm to .31 mm.*

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## Monitor Size And Orientation

### What It's Called Isn't Always What You Get

While monitors for computers display come in sizes ranging from 9 to 40 inches, the most popular are between 14 inches and 17 inches. The actual viewing size on a given monitor can vary quite a bit from its 14 inch or 17-inch label.

The same is given to diagonal measurements: screen to corner, or the outside edge (CRT) still, rather than all the glass visible within the monitor's bezel (that's the frame around the perimeter of the screen). A 14-inch monitor, for example, has a 14-inch CRT diagonal measurement, but the screen drawing inside the bezel might have 13 inches or 13 1/2 inches. So-called 14-inch monitors have screen that measuring 13 1/2 inches to 14 1/2 inches.

A diagonal screen size of up to 14 inches on a typical 12 inch monitor allows you to adjust the image to fill the screen from edge to edge and top to bottom, but the 13 1/2 inches on most 14 inch monitors will leave an unacceptably large border of black between the largest possible image and the

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NEW

# Monitor Buyer's Checklist

Here's a quick summary of the 10 most important things you want to get in your Windows monitor.



- **Monitor Size and Orientation:** A 15" monitor is the best size accommodated by Windows.
- **Resolution:** Your monitor should be capable of displaying 800 x 600 and 1024 x 768.
- **Pixel Pitch:** Monitors 15" or smaller should be 0.28mm. Monitors 16" or larger should be 0.25mm or smaller.
- **Refresh Rate and Line Scan Rate:** Your monitor should be able to refresh at a noninterlaced rate of at least 75Hz (for 800 x 600 and 768 x 600) or 85Hz (for 1024 x 768).
- **Interface versus Preinterface:** Your monitor should handle the higher resolution you want to view (interlaced mode).
- **Multifrequency & multifrequency mode:** It is best to take advantage of future advances in graphics card technologies.
- **Impedance:** Get anti-glare built in, as long as optional anti-glare screen. Look for anti and anti-line, and really avoid flickering for star position brightness.
- **Acquire this:** It's worth MPB II (EMTECH) specifications for resolution monitors.

- **Color:** 256 colors is fine for most mainstream business applications. 16-bit 32,768 colors and 24-bit 16.7 million colors are expensive overkill for most users.
- **Focus and Convergence:** Cheap monitors have poor focus and convergence. Good monitors have high performance electronics produce sharper characters edge-to-edge on the screen.
- **Display Technology:** Avoid conventional cathode tubes (found in even cheap 15" monitors, 16" monitors, and many 17" monitors). Trinitron or Flat Panel is best.

Monitors are classified as "low radiation" monitors, but that often means they are low to the VLF range only. Look for monitors that carry compliance with the Swedish MPR II (MPEMAC) standards for those are (or most stringent) and include both VLF and ELF emissions. Monitors that meet MPR II are said to have better electronics and be better built to grow older monitors than don't.

There has been a lot said lately about the dangers of radiation emitting from computer monitors

with an electric screen, which they reduce exposure slightly or get an optional anti-glare filter. If the filter is polished glass, better approach is generally quite satisfactory.

## What's Your Angle?

Most monitors have built-in tilt and vertical beam, maintaining the computer in front. You need to be able to move the monitor so it is angled for your height and eye level. Neck and back strain, fatigue and head aches can result from something as simple as an uncomfortable angle between your eye level and your screen.

## Be A Control Freak

You need only occasional control as you can easily make your adjustments for size, position, brightness and other variables. If you have to get up and reach around the side of back of your monitor every time you want to make a change, you will lose patience and access information.

## Emulation: Better Safe Than Sorry

There has been a lot said lately about the dangers of radiation emitting from computer monitors — and electric blankets for that matter. Many complaints all over the world are

reporting electromagnetic radiation (EMR), clock circuits and magnetic fields (MF) and how much computer displays emit.

A monitor emit some non-ionizing low-frequency EMR. Most commonly low frequency (ELF), which would include standard 60-cycle household current through Very Low Frequency (VLF) fields is several thousand cycles per second, to billions of cycles per second in the microwave range. Through strict standards upon the conduct to all electrical and the conditions as yet unclear, we all want to be able to sleep that night.

Many monitors built in the last year or

## Color

### How Many Colors in Your Rainbow?

The number of distinct colors you can see on your monitor is determined by the number of bits stored for each pixel. The more bits, the more colors. With a 1-bit color stored you can get 16 different shades, while 24-bit

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E&O.E.

# A Primer of Terms Every Monitor Buyer Should Know

**accelerator** This is a graphics accelerator card that adds a special chip to graphics functions to relieve some of the CPU, making the computer appear to run faster. Many newer computers have accelerated on-board video built in and most newer graphics cards are accelerated to accelerate graphics.

**anti-glare screen.** All displays should have a screen designed to eliminate glare and stop reflections so that the data and graphics are more distinct to reduce eye strain and fatigue. Polished glass screens are a no-no.

**convergence.** This is the alignment of the red, green, and blue electron beams that create each color. If the beams are not aligned, you'll see a rainbow or rainbow-like effect. Most monitor quality test design, shipping damage or inferior electronic alignment (convergence) problems.

**display.** A computer's visual output device is called a display or monitor. The terms are interchangeable. Display is more.

**dot pitch.** The dot pitch is the distance between two horizontal phosphors or adjacent dots in a display. Typical dot pitches measure from 0.24 mm to 0.41 mm. The smaller the dot pitch, the closer and denser the pixels. The dot pitch can be the difference between 30 and 31 in. if incorrectly built (provided it's not 31 in.).

**EUT.** Connecting Low Frequency electromagnetic radiation, which includes 60-Hertz household current.

**refreshes.** Monitors produce new images continuously (refresh) at rates as fast as 60 Hz. The most popular from University Low Frequency (ELF) which includes 60-Hertz household current, Very Low Frequency (VLF) which is around thousands of cycles per second is intense at cycles per second in the microwave range. Currently, there is a debate about the health risks of potential exposure to these exposures (cheap monitors that meet Canada's EUT (EMF/ELF) safety standards, which cover all the external ranges and risks).

**flat screen screen.** Though no monitor is flat, a computer's display screen is getting closer. All other things being equal, a flat screen has less reflection and less glare, providing a more pleasing view and more of it.

**Enter.** A clustering technique allows an operator to use a screen when the screen size is not that it might be used by the design of a computer system (VGA) (Video Electronics Standards Association) has established minimum refresh rates at 1000 refreshes per second in VGA and XGA and 750 in VESA.

**graphics adapter.** The video or graphics card or the on-board video in your computer that is responsible for displaying what you monitor. The design, the video quality and type. The adapter controls the display and sends it to your display. The rate and type between the adapter and the monitor determines the resolution, graphics and refresh rate.

of the image. A cluster analog sends the adapter as a pseudo to the monitor to make color. They're not getting any better.

**image size.** The physical screen measurement used to describe a monitor is essentially a second-off figure. A second 15-inch monitor is actually not a lot smaller than the first. Check the pixel count. Screen density (the number of pixels in the dot) for the image size you're getting.

**landscape display.** The horizontal "landscape" arrangement of a monitor designed for horizontal documents.

**multitasking.** A multitasking monitor can split up with several different requests with a given image. Requested by updating it into graphics systems with higher resolution.

**on television.** This is the preferred method of watching the screen by getting away from its own pixels and the screen. An external monitor is preferred to viewing many other lines using two pixels in front panel for each line and then two lines. This causes a display flicker.

**processor.** This is the microprocessor on the inside of a monitor that gives the monitor a brain. A color monitor has a brain composed of three processors, each of which gives either red, green or blue. The three colors are used to produce the appearance of all the colors you see.

**pixel display.** A display that offers both landscape and portrait views is a single monitor by allowing the user to physically rotate the monitor in the desired position. Pixel is a registered trademark of Sony. For monitors only (the feature are available from Philips Inc. for the Microscan and from Pantel Display Labs for 1000 computer PC).

**pixel.** A single picture element is a pixel in the smallest dot a monitor can produce. Pictures on the screen are made up of thousands of the little guys.

**portrait display.** A monitor that is capable of displaying a full page view of a vertical document. Preferred by people who spend more of their time doing 8 1/2 x 11 documents.

**refresh rate.** This is the measurement of how fast the electron gun paints the image (refreshes) on the screen in the monitor, measured in Hz (Hz). The refresh rate can get high, your monitor's refresh rate (refreshes) should be at least 1000 refreshes per second in the standard screen.

**resolution.** Simply stated, resolution is the number of pixels in a screen. Resolved by the number of pixels across by the number of pixels down. There are standard resolution standards. The most common these days for Windows VGA, 640 x 480, 1024 x 768, 1280 x 1024.

**ELF.** Very Low Frequency electromagnetic radiation (low frequency of cycles per second) [

Continued from page 18



For CAD and desktop publishing work Mitsubishi Electric Sales Canada Inc. offers the DiamondPro 21T, a 21-inch monitor with .31 mm dot pitch, flat anti-glare screen and color calibration system.

Contact Mitsubishi Electric Sales Canada Inc., 800-431-7700.

offer 256 shades. 15 bits offers 32,768 high color (and 34 bits goes all the way to 16.7 million colors) (That's about it.)

It is generally accepted that, although 4-bit is the least expensive way to go, the 16 colors it produces is very limiting. For most mainstream business users, 256 colors is a good solution. It really improves the appearance of gray-scale photographs, color images and color line art. Only those doing high-end color publishing with plans involving or CAD applications can really take advantage of high color or true color. The color processing power and memory required for those levels can be budget busters.

## Focus And Convergence

**Look Sharp, Now.** Focus and convergence are among the most important aspects of a monitor's picture quality. They determine how sharp the char-

acters in your text documents or spreadsheet look. They affect how much data you can put on the screen and at some time they can speed looking at it without expending fatigue and eyestrain.

Focus refers to how sharp the transitions are between dark and light. When you look at a black dot on a white background on a good monitor, the edge of the dot will be very sharp.

Convergence refers to the precision of the three primary colors, red, blue and green, that form white on the screen. Good convergence means the three colors overlap perfectly so there is no ghost or shadow around the image.

## Watch Out For The Focus

If you have poor focus and convergence, the characters will be very fuzzy and hard to read. You'll have to use large fonts to read them, reducing the amount of text you can

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### CRAYED MONITOR



### TOSHIBA 17"



## Monitors

Continued from page 19

to able to get on your system focus and convergence are determined by the electronics inside the monitor. Good monitors have high performance electronics, sometimes as small as hand-held, or as modulation transfer function.

High performance circuitry costs more, but the results are undeniably better-looking characters. The resolution gets higher (the lines become more important because the characters get smaller as the resolution gets higher). If they're blurry, you are missing the high contrast line you are getting from your graphics card or on-board video.

### Before You Own Eyes

For us and convergence are usually best in the middle of the screen. They become critical on toward the edges. Some differentials tell you all the way across the monitor, so you must have good focus and convergence on the edges. The way these elements are measured is highly technical, but you don't need to know that to make a judgment.

Simply look at text on the screen with your own eyes and you will clearly see the effects of focus and convergence. Just put up some text, look at the center, and be on the lookout for fuzziness and ghosts. If the text is sharp and crisp in the center, your monitor has good focus and convergence control.

ed technology and the image size and clarity will be much less than with the new technology.

To extend, a more recent technology is TriDot, developed by Image Corp. in a TriDot display. Instead of the line being in the middle, it is cylindrical with a conical curve from side to side and no curve from top to bottom. This provides more uniform focus, allowing a huge margin for displayed. Features when are considered superior to conventional video sets. They come in 14 inch and 17 inch sizes.

Flat. Again, the screen technology which came into its own in 1990. It called the square, in which the plane is specifically designed to be much flatter to provide a big or large and flat, and there very sharp, square corners. They have much less distortion, better images and the focus and convergence are much better.

They are more expensive and have only been in volume production for the last two years. NEC, Sanyo, and Hitachi make 13 inch and 17 inch desktop monitors with Multisync edges and Portrait Display Sets.

make a 13 inch flat space monitor with both landscape and portrait (or full page) orientations.

Features such monitors will clearly go out of production. They're an obsolete technology like an Intel 286 chip. All the people could bring developed today are the higher end, higher quality monitors. ■

Reprinted from the book: *The Monitor Man*, by Bruce A. Davis by Bruce James Davis for the author, courtesy of Peridot Publishing Ltd. 1-800-888-7700

## Monitor Technology

### The World's Bestest Explanation of How Monitors Work

Your computer and graphics card converse about the instructions you have given them as to what you want to see on your display screen. The signal is then sent to the monitor. The monitor uses an electron gun to "paint" the image according to your instructions.

The electron gun, which scans back and forth very rapidly, causes phosphors on the inside of the screen to glow. On a color monitor, these phosphors use red, green and blue which can be mixed to create other colors. The phosphors glow very briefly before fading, as the electron gun has to repeat them ("refresh") many times each second.

If it refreshes them fast enough, the picture seems solid. If not, the phosphors dim slightly before the electron gun hits them again and you perceive a flicker on the screen.

### It's All in the Shape of the Beams

All monitors are made out of a glass bowl, which is the tube. Inside, there is very fast moving shapes and the lines. The 14 and 17 inch categories that we're talking about here are those drawn shapes and beams and all around to all manufacturers are one in the same.

Conventional color. The oldest of the three tube types is called "conventional color." They are covered with a beige or off-white and a rounded corners and they've been around for 10 or more years. They are used in 13, 14 and 16 inch monitors, such as our 14-inch monitors sold by all the major computer manufacturers.

Thin is an older, and therefore lower cost technology. Because of the shape of the tube line it can be used to display the image so you get to see text on the screen. If you buy a lot of text, you are looking at the best-



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This problem is completely backwards. Compatible with earlier models, meaning it is able to run older LaserJet III and II printers. This is good, even for anyone who is not a [ghostalgorithms.com](http://www.ghostalgorithms.com). Also, the design system can take full advantage of the 486 as long as all applications are a LaserJet II or run on all three levels are LaserJet III drivers, even on old ones like the LaserJet II. It will even

The new machine user's manual contains appendices covering all printer command control codes for flow and variables. Should

some software allow the entering of a 4 to 6 code. Instead of having a software, however, consider enough built-in drivers and extra checks to make it less convenient.

For complete compatibility with the LaserJet 4, the 4P-values offer some 45 scalable-interval typefaces: pinstripes in 0.25-point increments; Pinstripes in 0.25-point increments; Pinstripes in 0.25-point increments up to 999.75 points, all through Windows with only 450Kb space, and a 100% Windows

The standard tests include the usual GG Times, Unlaid, and Coated, as the case demands. GG Times and Coated are the most common. GG Times and Coated are the most common.

harder to track, make field identification and even conduct testing on the case of limited or poor conditions are common.

Some of the fonts, such as **Illustra** (also **Field**, **Illustration Condensed**, and **Reaper**) offer bold as well as the display type, and there is Spanish and German (a different script) as well, to cover a broad range of needs.

First quality is excellent, as per with the harvest. 4 The width of finely detailed type-faces appear smooth and well-defined, even at very small point sizes. The headlines

Enhancement takes care of what little was left there is at 100-dpi no problem; that and just really superior to what most people are accustomed to seeing emerge from a laser printer.

Diagrams and graphic images are also far better than those obtainable in 2D. Up. While not quite up to computer-aided standards, medical photographs may reproduce well enough on film that it be used as a source for more discussion on the left, medium-size.

Under certain conditions, however, "blinding" can occur. Presumably because of the small size of the probes and joint mechanism, the drum is very small just above the inlet. Consequently, the drum is a typical resonator cavity that will have losses where it is excited but none at all for the lower losses.

This means that to apply noise to a letter or text page, the noise must be changed, maintained and then changed again up to nine times. For letters and pages containing black and white graphics there is no problem, but on pages that contain a mix of solid blacks and large halftones, best "global" images of the solid areas sometimes appear as lines of halftone.

This is caused by a critical change built on the dream by the design team. Many were well and experienced in ecology (but not for others) it will be a serious issue now that likely could have been avoided had the dream been designed with an all work community design concept. A full range of a simple change.

[illegible]

One advantage the SP has over the Lint is in Memory Management. This feature only applies to pictures on the page (as eliminating more complex images to be placed with a floating point array) I have would therefore be possible. If you really go to complicated graphics you will probably get by with just the standard Lint. I assume complex images may overload the memory however taking a picture of the page to be printed is not.

**HP recommends:** Use an additional 300 lb be added if you regularly print pages with very detailed graphics with a large format being laid out printing. Some Military Government will not need to be implemented in other.

This sticker also applies to the LaserJet 6400. Despite 64MB of standard memory in this model, users may find that they need more for the plotting graphics, among the Post-Script's huge memory requirements. There can upgrade to a maximum of 16MB, and that's for users who may need it at a later date. A Bowdoin Level 2 cartridge is optional.

A benefit of being a state of the art design is greater eco-friendliness than its predecessors. An Ecotrade shows lower savings of about 50 percent for steel pipes, versus more costly, bulky, heavy, expensive,

[illegible]







CombiColor, Adobe Illustrator or Adobe Photoshop when thermal transfer needs a more appropriate and economical solution.

If you really wanted to output a Post Script image in photo-realistic mode there are several high-end Post Script printers that can help. Priced from \$1 to \$2,000, a Transcolor Pro and Adobe Photoshop 3.2 can all deliver PostScript code and turn it into a high-resolution image, which may then be output to the printer in photo-real mode by a program such as PhotoShop (like the PostScript 4.0 can also output files in PostScript format in our modified 3.0) with an optional support driver by Adobe called EPS Exchange 1.00. In these programs a large PostScript file is also available on the PC.

A company spokesperson said that Page printers are enhancing dye sublimation Post Script output in the future. Either all the data is sent or managed through a third party.

Heading one straight forward, we used the Choctaw to select the driver, entered the print command to the transfer data, and then selected Page Setup and Print as usual.

Page Setup has different quality settings available. We found that the print quality should be set to high for most printing applications.

Following Print from the file menu I selected the document. A button labeled Print Now does just what you'd expect. The company provides a utility called Disk2000. Backgrounded, but says that Print Now doesn't do best results when printing dye-sub images.

The background utility in 2000 is in the background and will use about half of the available free memory when printing. If you want it to use more memory to increase print processing speed, you may increase the memory used.

#### Cost Per Page

Key factors to consider when contemplating the purchase of any printer are the cost per page, availability of consumables, and life-time (total cost) between failures.

The first expense cost per page is with a black ribbon (see the chart below for relative costs of the different print modes). While it, the company claims the Printer becomes a "one less quality" printer. While not of the Printer's 200-dpi resolution (about the same as a domestic ink jet) all that good for you. While we appreciate the printer's capability, this resolution is acceptable quality for my printer. But it's fairly cheap. When the machine is printing full-color photographic images, the 200-dpi resolution isn't a problem for me. The sample prints we created with our own and several money-true around the office. Comments included "fantastic," "really good" and "damn good." One small member observed, "that little printer is the best thing I've seen in a long time."

The 200-dpi photo-realistic upgrade kit contains a 4-disk, a "starter ribbon" (good for 10 pages and 14 pieces of special paper to print on), full pads are much less expensive, costing \$29.95 for 25 sheets.

So, in answer to the company's changing plenty for the software on the disk for it is the software that transforms the pictures from a dark, mid-resolution thermal transfer picture into the much more impressive dye-sub print. Nevertheless, we suspect that many enterprises will want the dye-sub option. It's complex, while not quite up to the standards of the 300-dpi unit, is beautiful.

Registered owners of the printer receive a coupon entitling them to 10 percent off their next purchase of supplies. The company also offers a range of ribbon, paper, transparency film, plus cleaning kit and a wide range of other accessories including a special 1/4" paper for creating T-shirt art.

Costs: supported. The Printer is also capable of printing photo-realistic images on image. Image helped each support unit sold. The company in Colorado called. Call us directly at 1-800-445-8800 with a credit card or a check (no cash) and, in a direct business, a "big print" and, in

fact, possibly even with a limited stock price listed for the Printer's (500, all we need is a mail).

Looking for a moment for Printer's reputation for performance and looking at its output objectively is the best way to determine if this is a worthwhile printer for you. If you are likely to be disappointed that the Printer is a support unit, it's not that of a 300-dpi printer. There's no doubt that if you have been paying for 10 to 200 more units, you'll change for a dye-sub or other type of print. But even a machine to create your own, the Printer is a good choice.

It can produce great to registered image presentation pages and other full-color images. It will also most certainly impress clients who are used to the quality of color laser print-outs. Although we wouldn't recommend using any dye-sub as thermal transfer printer as a color-printing device, the Printer's colors are accurate enough — especially with Calabrian in thermal transfer mode — to do most color printing.

Continued on page 14



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### Scanner Comparison

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- loaded scanning width
- susceptibility to format error
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- Cannot replace the machine & copy

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- ADF feeds, easy to operate
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## PRACTICE

# HP targets small business, home offices with new line of "ColorSmart" DeskJet Printers



ry than offset by any other major manufacturer. According to third-party research commissioned by HP, its DeskJet brand printers enjoy the highest customer satisfaction rating of all major brands worldwide.

HP says it is the world's leading supplier of inkjet printers, and has sold more than 30 mil-

lion inkjet printers since the first one was introduced in 1984.

According to HP the ColorSmart claim and the new ink cartridges can improve the print quality of all existing HP color printers, including older PhotoPrinters, DeskJets and DeskPrinters.

Owners of HP color printers can obtain the above from HP at a \$300 U.S. (U.S.) one-time cost and charge \$299.00 plus local taxes.

For other systems, call HP technical support at 800-555-5551. Cross-reference: 1, then option 2.

FOCUS — Hewlett-Packard (Hewlett) Ltd. has launched a new line of DeskJet printers priced for the small business and home office market. The line up includes two color printers and two monochrome printers, each with 480x600 dpi resolution. This makes the most extensive DeskJet printer environment ever made by the world's leading supplier of office printers.

The four printers include the entry DeskJet 540C, the most recent DeskJet 530 and the Macintosh computers the DeskWriter 540C and DeskPrint 520. The 540C and 520 have Canadian list prices of \$199 and \$149 respectively.

Color printers in the new line feature a new printer driver HP calls "Intelligent Technology." Called an ColorSmart, the new software system lets printers operate at print quality for every document, with no adjustment in formatting necessary. The use of algorithms support black printing at 600x600 dpi, and color printing at 300 dpi.

"ColorSmart" does for color printing what autofocus did for the 35 mm camera in the 70s — it automates exactly what you see on the screen with the simple push of a button — and helps business professionals manage images. "ColorSmart" will automatically analyze each page for text, graphics and photographic elements and then set focus controls to deliver the best color and print quality possible for every page. The results are crisp text, more vibrant colors and clearer photographic images — sheets."

For those in need of superior black print quality for their documents, HP has introduced its new ultra enhancement technology (UE), which the company pioneered as its laserjet printer.

All existing HP color printers can be upgraded to include ColorSmart. The company is making the software available to any HP customer for the cost of the drive. The technology is compatible with applications based and operating systems based color management systems. ColorSmart also has a standard one-side function for users who want to create one-sided sheets.

The new line replaces HP's most popular inkjet printers including the world's best-selling printer, the DeskJet 600. It is being to the total number of DeskJet models now available from HP with 105 and 600 dpi resolution. HP says it is the only manufacturer to offer these capabilities to all printers.

In 1993, HP shipped more than five million new DeskJet worldwide. Approximately two million of these were color, an increase of 122 percent from 1992. This represents more units than all other makes of color printers ever listed, according to a U.S.-based market research firm.

The new HP printers come standard with a three-year limited warranty — a longer warranty

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Plesco's ScanPlus ADF-10000 is a just-what-you-need scanner that will get you into the black and white graphic ad world. However, its real strength is its document handling. It has a built-in 10-page document feeder and comes with Hyper-Clip document filing software.

The Computer Paper reviewed Plesco's ScanPlus Color 4000 last year, and like that unit, the ADF-10000 is a compact, capable unit that quickly gets into doing what it was designed to do without much fanfare or trouble.

**Installation:** The ADF-10000 comes with an ISA bus interface card with pumps that must be set to

match conflicts with other cards you may have on your PC. If you know about IRQ settings, finding the scanner shouldn't prove to be too great a challenge. On the other hand, if you think the inside of the computer is a random place, you will need a knowledgeable person to help you install the card. The first time I tried to set up the scanner, and the installation program wouldn't work properly, so I loaded the scanner driver manually and figured out the proper jumper settings by trial and error. The scanner costs fairly enough, given my knowledge of a serious case of the blues, so it took a little while to negotiate a trade between the cards.

A couple of weeks from a replacement set of diskettes arrived from Plesco. I removed the manually installed driver and ran the setup program. This time it worked as it was supposed to, installing the scanner driver, mapping my error and telling me which IRQs and addresses were used. Then it was a matter of writing the pumps to the new set

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### Performance

Photos and on a copy of Future Publishing's Windows OCR software (which I sell for \$19.95; it now also has a scanner), and Microsoft's Photo Edition 3.0. I've had the full version of Photo Edition in my desk (it's a shame it's not available for sale). We also had Future Publishing's Windows OCR software. So we had the scanner with both the software.

**The introduction to the market of low-cost software for the PC — paired with falling prices for scanners — has brought document image management within the reach of many smaller businesses.**

The ASP designation stands for automatic document feeder. The model comes with a transparent plastic document tray that attaches to the front of the unit and holds approximately 50 sheets of paper.

In the more than two years that we've been working with it, but had occasional problems that we've had to solve. The paper also seemed to be a problem. When the paper is too thick, the scanner will not scan it. The paper also seemed to be a problem. When the paper is too thick, the scanner will not scan it.

The accuracy of optical character recognition depends on the software. For example, we discovered different results scanning the same page with the ASP 4800 and then scanning the same page with the ASP 4800. The accuracy of optical character recognition depends on the software. For example, we discovered different results scanning the same page with the ASP 4800 and then scanning the same page with the ASP 4800.

With image, the scanner also worked quite well and would be more than adequate for producing medium quality black and white or grayscale images.

Photo Publisher recognized the scanner (the ASP 4800) in its Scan-to-PDF program, and copying photos onto and into its provided capabilities.

### Budget Document Image Management

We also tried the scanner with a copy of Microsoft's desktop document image management application that runs under Windows. The two seemed to work quite well. By combining them you could create a desktop document image management system for approximately \$2,000.

Document image management. If you don't know it's a process that allows you to store paper documents in electronic form. Such systems have many uses: they can be used to store documents, they can be used to store documents, they can be used to store documents. They can be used to store documents. They can be used to store documents. They can be used to store documents.

Image management works like magic at many different businesses.

To be practical, a system needs a fast scanner to feed the pages. An imaging system that the paper images can be retrieved quickly and — especially — at optical character recognition speeds so that a scanned file can be converted to ASCII text. The device ability of the latter feature depends on the application. If all you want is to store a page or two of documents, for example, OCR wouldn't be needed.

Remember, however, that, and actually

within every key word in the text file is a case when it produces an OCR. Initially the scanner software wouldn't work with the Photos, but the software company told us to call its support line and download a scanner file. Once that was done, the software and the scanner worked together properly.

For those that need a low-cost image management system, this combination is worth considering. The software and scanner appear to be a good match, and the scanner is an adjustable "fuzzy search" engine that takes into account noise in the OCR process.

For high volume document image management, however, the choice is probably too slow. The scanner is rated at 3.5 pages per minute. To scan, index and OCR 10 to 15 pages (typical pages) takes approximately 10 minutes.

Compare that to the dedicated document image management system recently added by Microsoft's OfficeScan, and you will see why the latter found by many users. The system has a scanner that is rated at 40 pages per minute if the number of pages is

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## Color Seps On The Desktop

**Title:** Color Separation on the Desktop  
**Authors:** Miles Southworth and Dennis Southworth  
**Year:** Graphic Arts Publishing Company, 2000  
 Brochure 960 Pages 14cm (x) 21cm  
 75¢/1.00 (USA) for US\$1.00/1.50  
**Price:** \$59.95 (US\$1.00/1.50)  
**Availability:** A 96-page color-rich brochure, complete with a chapter on color calibration, contains ideas, 350 color separations.

Color Separation on the Desktop by Miles Southworth and Dennis Southworth offers advice on how to achieve the best looking color reproductions under a given situation and set of printing conditions. Published by

Graphic Arts Publishing, the book includes color theory, color examples and a step-by-step procedure for getting perfect separations.

The procedures are based on the proven methods used on high-end machines and are easily adapted to the Mac and PC with the appropriate applications. The publisher claims the book is a must read for those doing desktop separations and page makeup, and states that similar books written by professionals, Color Separation on the Desktop is easy to read and follow.

Contact: Graphic Arts Pub., 710 940-0776



*The ADF 600 G has a built-in document feeder that will hold up to 50 sheets making it well-suited for OCR applications or electronic document image management.*

can virtually fit the bill by far, of course. Also included is a Microbeam projector, large monochrome LCD flat panel screen that can be turned to either a wide or tall orientation and a printer. The full system will cost you about \$20,000.

### Qualities

The following are status qualities I have with the machine: I don't see them as major flaws

— given the relatively low cost of the unit, some sacrifices in design and construction are to be expected.

The ADF 600G doesn't have an all-on-board or even a power cord. It dips power from the computer through the interface card. I didn't care for this arrangement.

*Continued on page 34*

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1982	0	0	0	0	0
1983	0	0	0	0	0
1984	0	0	0	0	0
1985	0	0	0	0	0
1986	0	0	0	0	0
1987	0	0	0	0	0
1988	0	0	0	0	0
1989	0	0	0	0	0
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1997	0	0	0	0	0
1998	0	0	0	0	0
1999	0	0	0	0	0
2000	0	10	10	0	0
2001	0	15	15	0	0
2002	0	20	20	0	0
2003	0	25	25	0	0
2004	0	30	30	0	0
2005	0	35	35	0	0
2006	0	40	40	0	0
2007	0	45	45	0	0
2008	0	50	50	0	0
2009	0	55	55	0	0
2010	0	60	60	0	0
2011	0	65	65	0	0
2012	0	70	70	0	0
2013	0	75	75	0	0
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## Desktop Publisher's Hit List

Continued from page 39

not black, and even crops automatically. There are also many new controls for leveling, spacing, and alignment.

Microsoft never tried not to limit this program's ability to connect with Windows 3.0's file-fall function. We discovered a hidden option worth investigating. If you hold down the Option key while selecting the Internet item in the File/Options submenu of the Arrange menu, an alternate submenu table, listing how pages are set up, a "Transparency" table. This allows direct interaction with variable opacity, as shown in the illustration below.



Transparency options appear in Publisher's. The top-left shape was created using Publisher's standard interaction command. The top-right set of circles shows the same shape after action while holding down the Option key in the lower-right. The original shapes are shown for comparison.

The interface has been refined in Adobe InDesign 4.0. You won't have to dig through dialog boxes anymore. InDesign allows (re)positioning of floating objects. All the features present in earlier versions of the program are still there (layers, multiple levels of Undo and so on). But the company has dramatically reorganized the user interface. Regularly, many of the differences were noted from a perspective called Viewers like the Microsoft company — written by Adobe's developers in InDesign.

Version 4.0 also incorporates the fast flexibility that was previously available to users of native Windows. It has an optional extension from Adobe called UPS (Upgrade) among other things. This allows InDesign 4.0 to save files that are compatible with Adobe Photoshop and Illustrator 3.0. Other long-standing improvements include an "InDesign's" ability to save as GIFs, the ability to be printed and edited from the same page in test or live.

Version 4.0 like the 3.0 version is not available on the Internet.

It is worth noting that Adobe regularly was awarded for its customer service — an important consideration. The company was awarded "Best Service/Support award" for desktop publishing by Computerworld in 1993. Also that year, the National Academy of Desktop Publishers awarded the company a "User Support Award". The Academy's role of helping and former business awarded Adobe "Best Technical Support" and the Call Center Conference and Exposition gave the company an "Award for Excellence".

Adobe offers a 30-day money-back guarantee and promises that if a user is not satisfied for any reason, it will refund the purchase price and sales tax — no questions asked.

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Value: \$499.95 to \$129.95. The upgrade is available. At press time, Adobe was offering InDesign at a discount to previous owners of PageMaker, its flagship DTP package.

Performance: \$499.95 performance is good.

Overall Rating: \$499.95. It has handling power is more important than position. Special effects. InDesign is the best choice in desktop publishing software on the Mac, and is a worthwhile competitor to CorelDRAW on the PC.

## DTP Applications

Corel Ventura Publisher (VPC) — Long time Ventura users have reason to rejoice. Ventura Publisher has a new lease on life, now that it has been bought by Canada's Corel Corp. (headquartered in Ottawa). Corel dramatically reduced the price. It offers such a wealth of clip art and fonts on their CD-ROMs that it is a worthy addition to a Windows-based publisher's software toolbox, even if they are another DTP package.

If it's not a bad program, either, in fact, Ventura Publisher, and the Windows-based version (Corel bought the program) received the highest rating for ease of learning among all high-end desktop publishing for the PC in the August 3, 1993 edition of

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the end of this article: its content does not diminish its legitimacy. Its ability to automatically flow into around an employee is shaped graphic and as on. Those who argued that it is a high resolution image that is a mere business plan for the program for its ability to do all this and graphics used in a document and, through low professionals actually use the program, at least a modest implementation of a function called trapping, that helps around whole page between adjacent columns. These are the kind of features that have

updates to version 1.2 of the program were avoided to illustrate that they had to pay more for help on installing in institutional use. The new version 1.2, if they had to use one of those 90 days of "free" technical support, his reaction: it is a great solution.

Many of the program's limitations, such as its lack of a text editor, drawing module or table-of-contents generator, have been addressed through third-party additions. These "Add-ons" as they are known, are available from many third-party companies. One of Aldus' selling points of PageMaker 1.0 is its description that if you want to buy XPS from the QuarkXPress to duplicate all of the functionality in PageMaker 1.2 you would have to spend several thousand dollars.

Although the majority of XPresses are commercial products it is the 1200x1200 range, there are a variety of free add-ons from Quark's software removal enhance them to XPS including "Ruler" (Ruler of the "Ruler" and the new program "Ruler"). The latter XPresses contains a new step and repeat tool and new drawing tools with three pop-ups that are from the 100 and 100 of the 2000s.

• On-page display: a page of the page in your document.

• Late Check automatically searches for typographical/orthographic errors.

• Super layout: layout is a sophisticated method for repeating/spacing on a page.

• Full feature PDF Output: allows the rendering of PDF pictures for output on your printer.

Other popular features include Cool Words - a set of advanced gradient fonts - and FontMaker. This XPress gives the program the ability to automatically format

pages (11.5 becomes 11.7) and text size (11.5 becomes 11.7). Perhaps an interesting feature might not be a real time-saver for some.

Adding more can download them and other files from the XPS area on CompuServe or several other major information services.

Other new 1.21093, the network copy protected program is called a separate Upgrade range from 121175, which, early, XPress upgrades are typically a very small size, you can open other files but you can't save them. Don't upgrade them to do in an hour.

Performance: While Performance is very good, some familiarity with both PageMaker and XPress typically claim that XPress version 1.21093.

Overall Rating: While the company's customer support policies could be a bit

less to their comparison with XPress, in fact, many of the features are a particularly well implemented in Aldus' program. For example, when PageMaker creates a Drop Cap it increases the size of the first character, its subscript, it, then sets over the leading character to make room for it. Plus and, clearly, until you decide to change the point

fi fi fl fl

QuarkXPress can control how alternative pages such as 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.0, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 7.0, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 8.0, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 10.0, 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 11.8, 11.9, 12.0, 12.1, 12.2, 12.3, 12.4, 12.5, 12.6, 12.7, 12.8, 12.9, 13.0, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7, 13.8, 13.9, 14.0, 14.1, 14.2, 14.3, 14.4, 14.5, 14.6, 14.7, 14.8, 14.9, 15.0, 15.1, 15.2, 15.3, 15.4, 15.5, 15.6, 15.7, 15.8, 15.9, 16.0, 16.1, 16.2, 16.3, 16.4, 16.5, 16.6, 16.7, 16.8, 16.9, 17.0, 17.1, 17.2, 17.3, 17.4, 17.5, 17.6, 17.7, 17.8, 17.9, 18.0, 18.1, 18.2, 18.3, 18.4, 18.5, 18.6, 18.7, 18.8, 18.9, 19.0, 19.1, 19.2, 19.3, 19.4, 19.5, 19.6, 19.7, 19.8, 19.9, 20.0, 20.1, 20.2, 20.3, 20.4, 20.5, 20.6, 20.7, 20.8, 20.9, 21.0, 21.1, 21.2, 21.3, 21.4, 21.5, 21.6, 21.7, 21.8, 21.9, 22.0, 22.1, 22.2, 22.3, 22.4, 22.5, 22.6, 22.7, 22.8, 22.9, 23.0, 23.1, 23.2, 23.3, 23.4, 23.5, 23.6, 23.7, 23.8, 23.9, 24.0, 24.1, 24.2, 24.3, 24.4, 24.5, 24.6, 24.7, 24.8, 24.9, 25.0, 25.1, 25.2, 25.3, 25.4, 25.5, 25.6, 25.7, 25.8, 25.9, 26.0, 26.1, 26.2, 26.3, 26.4, 26.5, 26.6, 26.7, 26.8, 26.9, 27.0, 27.1, 27.2, 27.3, 27.4, 27.5, 27.6, 27.7, 27.8, 27.9, 28.0, 28.1, 28.2, 28.3, 28.4, 28.5, 28.6, 28.7, 28.8, 28.9, 29.0, 29.1, 29.2, 29.3, 29.4, 29.5, 29.6, 29.7, 29.8, 29.9, 30.0, 30.1, 30.2, 30.3, 30.4, 30.5, 30.6, 30.7, 30.8, 30.9, 31.0, 31.1, 31.2, 31.3, 31.4, 31.5, 31.6, 31.7, 31.8, 31.9, 32.0, 32.1, 32.2, 32.3, 32.4, 32.5, 32.6, 32.7, 32.8, 32.9, 33.0, 33.1, 33.2, 33.3, 33.4, 33.5, 33.6, 33.7, 33.8, 33.9, 34.0, 34.1, 34.2, 34.3, 34.4, 34.5, 34.6, 34.7, 34.8, 34.9, 35.0, 35.1, 35.2, 35.3, 35.4, 35.5, 35.6, 35.7, 35.8, 35.9, 36.0, 36.1, 36.2, 36.3, 36.4, 36.5, 36.6, 36.7, 36.8, 36.9, 37.0, 37.1, 37.2, 37.3, 37.4, 37.5, 37.6, 37.7, 37.8, 37.9, 38.0, 38.1, 38.2, 38.3, 38.4, 38.5, 38.6, 38.7, 38.8, 38.9, 39.0, 39.1, 39.2, 39.3, 39.4, 39.5, 39.6, 39.7, 39.8, 39.9, 40.0, 40.1, 40.2, 40.3, 40.4, 40.5, 40.6, 40.7, 40.8, 40.9, 41.0, 41.1, 41.2, 41.3, 41.4, 41.5, 41.6, 41.7, 41.8, 41.9, 42.0, 42.1, 42.2, 42.3, 42.4, 42.5, 42.6, 42.7, 42.8, 42.9, 43.0, 43.1, 43.2, 43.3, 43.4, 43.5, 43.6, 43.7, 43.8, 43.9, 44.0, 44.1, 44.2, 44.3, 44.4, 44.5, 44.6, 44.7, 44.8, 44.9, 45.0, 45.1, 45.2, 45.3, 45.4, 45.5, 45.6, 45.7, 45.8, 45.9, 46.0, 46.1, 46.2, 46.3, 46.4, 46.5, 46.6, 46.7, 46.8, 46.9, 47.0, 47.1, 47.2, 47.3, 47.4, 47.5, 47.6, 47.7, 47.8, 47.9, 48.0, 48.1, 48.2, 48.3, 48.4, 48.5, 48.6, 48.7, 48.8, 48.9, 49.0, 49.1, 49.2, 49.3, 49.4, 49.5, 49.6, 49.7, 49.8, 49.9, 50.0, 50.1, 50.2, 50.3, 50.4, 50.5, 50.6, 50.7, 50.8, 50.9, 51.0, 51.1, 51.2, 51.3, 51.4, 51.5, 51.6, 51.7, 51.8, 51.9, 52.0, 52.1, 52.2, 52.3, 52.4, 52.5, 52.6, 52.7, 52.8, 52.9, 53.0, 53.1, 53.2, 53.3, 53.4, 53.5, 53.6, 53.7, 53.8, 53.9, 54.0, 54.1, 54.2, 54.3, 54.4, 54.5, 54.6, 54.7, 54.8, 54.9, 55.0, 55.1, 55.2, 55.3, 55.4, 55.5, 55.6, 55.7, 55.8, 55.9, 56.0, 56.1, 56.2, 56.3, 56.4, 56.5, 56.6, 56.7, 56.8, 56.9, 57.0, 57.1, 57.2, 57.3, 57.4, 57.5, 57.6, 57.7, 57.8, 57.9, 58.0, 58.1, 58.2, 58.3, 58.4, 58.5, 58.6, 58.7, 58.8, 58.9, 59.0, 59.1, 59.2, 59.3, 59.4, 59.5, 59.6, 59.7, 59.8, 59.9, 60.0, 60.1, 60.2, 60.3, 60.4, 60.5, 60.6, 60.7, 60.8, 60.9, 61.0, 61.1, 61.2, 61.3, 61.4, 61.5, 61.6, 61.7, 61.8, 61.9, 62.0, 62.1, 62.2, 62.3, 62.4, 62.5, 62.6, 62.7, 62.8, 62.9, 63.0, 63.1, 63.2, 63.3, 63.4, 63.5, 63.6, 63.7, 63.8, 63.9, 64.0, 64.1, 64.2, 64.3, 64.4, 64.5, 64.6, 64.7, 64.8, 64.9, 65.0, 65.1, 65.2, 65.3, 65.4, 65.5, 65.6, 65.7, 65.8, 65.9, 66.0, 66.1, 66.2, 66.3, 66.4, 66.5, 66.6, 66.7, 66.8, 66.9, 67.0, 67.1, 67.2, 67.3, 67.4, 67.5, 67.6, 67.7, 67.8, 67.9, 68.0, 68.1, 68.2, 68.3, 68.4, 68.5, 68.6, 68.7, 68.8, 68.9, 69.0, 69.1, 69.2, 69.3, 69.4, 69.5, 69.6, 69.7, 69.8, 69.9, 70.0, 70.1, 70.2, 70.3, 70.4, 70.5, 70.6, 70.7, 70.8, 70.9, 71.0, 71.1, 71.2, 71.3, 71.4, 71.5, 71.6, 71.7, 71.8, 71.9, 72.0, 72.1, 72.2, 72.3, 72.4, 72.5, 72.6, 72.7, 72.8, 72.9, 73.0, 73.1, 73.2, 73.3, 73.4, 73.5, 73.6, 73.7, 73.8, 73.9, 74.0, 74.1, 74.2, 74.3, 74.4, 74.5, 74.6, 74.7, 74.8, 74.9, 75.0, 75.1, 75.2, 75.3, 75.4, 75.5, 75.6, 75.7, 75.8, 75.9, 76.0, 76.1, 76.2, 76.3, 76.4, 76.5, 76.6, 76.7, 76.8, 76.9, 77.0, 77.1, 77.2, 77.3, 77.4, 77.5, 77.6, 77.7, 77.8, 77.9, 78.0, 78.1, 78.2, 78.3, 78.4, 78.5, 78.6, 78.7, 78.8, 78.9, 79.0, 79.1, 79.2, 79.3, 79.4, 79.5, 79.6, 79.7, 79.8, 79.9, 80.0, 80.1, 80.2, 80.3, 80.4, 80.5, 80.6, 80.7, 80.8, 80.9, 81.0, 81.1, 81.2, 81.3, 81.4, 81.5, 81.6, 81.7, 81.8, 81.9, 82.0, 82.1, 82.2, 82.3, 82.4, 82.5, 82.6, 82.7, 82.8, 82.9, 83.0, 83.1, 83.2, 83.3, 83.4, 83.5, 83.6, 83.7, 83.8, 83.9, 84.0, 84.1, 84.2, 84.3, 84.4, 84.5, 84.6, 84.7, 84.8, 84.9, 85.0, 85.1, 85.2, 85.3, 85.4, 85.5, 85.6, 85.7, 85.8, 85.9, 86.0, 86.1, 86.2, 86.3, 86.4, 86.5, 86.6, 86.7, 86.8, 86.9, 87.0, 87.1, 87.2, 87.3, 87.4, 87.5, 87.6, 87.7, 87.8, 87.9, 88.0, 88.1, 88.2, 88.3, 88.4, 88.5, 88.6, 88.7, 88.8, 88.9, 89.0, 89.1, 89.2, 89.3, 89.4, 89.5, 89.6, 89.7, 89.8, 89.9, 90.0, 90.1, 90.2, 90.3, 90.4, 90.5, 90.6, 90.7, 90.8, 90.9, 91.0, 91.1, 91.2, 91.3, 91.4, 91.5, 91.6, 91.7, 91.8, 91.9, 92.0, 92.1, 92.2, 92.3, 92.4, 92.5, 92.6, 92.7, 92.8, 92.9, 93.0, 93.1, 93.2, 93.3, 93.4, 93.5, 93.6, 93.7, 93.8, 93.9, 94.0, 94.1, 94.2, 94.3, 94.4, 94.5, 94.6, 94.7, 94.8, 94.9, 95.0, 95.1, 95.2, 95.3, 95.4, 95.5, 95.6, 95.7, 95.8, 95.9, 96.0, 96.1, 96.2, 96.3, 96.4, 96.5, 96.6, 96.7, 96.8, 96.9, 97.0, 97.1, 97.2, 97.3, 97.4, 97.5, 97.6, 97.7, 97.8, 97.9, 98.0, 98.1, 98.2, 98.3, 98.4, 98.5, 98.6, 98.7, 98.8, 98.9, 99.0, 99.1, 99.2, 99.3, 99.4, 99.5, 99.6, 99.7, 99.8, 99.9, 100.0, 100.1, 100.2, 100.3, 100.4, 100.5, 100.6, 100.7, 100.8, 100.9, 101.0, 101.1, 101.2, 101.3, 101.4, 101.5, 101.6, 101.7, 101.8, 101.9, 102.0, 102.1, 102.2, 102.3, 102.4, 102.5, 102.6, 102.7, 102.8, 102.9, 103.0, 103.1, 103.2, 103.3, 103.4, 103.5, 103.6, 103.7, 103.8, 103.9, 104.0, 104.1, 104.2, 104.3, 104.4, 104.5, 104.6, 104.7, 104.8, 104.9, 105.0, 105.1, 105.2, 105.3, 105.4, 105.5, 105.6, 105.7, 105.8, 105.9, 106.0, 106.1, 106.2, 106.3, 106.4, 106.5, 106.6, 106.7, 106.8, 106.9, 107.0, 107.1, 107.2, 107.3, 107.4, 107.5, 107.6, 107.7, 107.8, 107.9, 108.0, 108.1, 108.2, 108.3, 108.4, 108.5, 108.6, 108.7, 108.8, 108.9, 109.0, 109.1, 109.2, 109.3, 109.4, 109.5, 109.6, 109.7, 109.8, 109.9, 110.0, 110.1, 110.2, 110.3, 110.4, 110.5, 110.6, 110.7, 110.8, 110.9, 111.0, 111.1, 111.2, 111.3, 111.4, 111.5, 111.6, 111.7, 111.8, 111.9, 112.0, 112.1, 112.2, 112.3, 112.4, 112.5, 112.6, 112.7, 112.8, 112.9, 113.0, 113.1, 113.2, 113.3, 113.4, 113.5, 113.6, 113.7, 113.8, 113.9, 114.0, 114.1, 114.2, 114.3, 114.4, 114.5, 114.6, 114.7, 114.8, 114.9, 115.0, 115.1, 115.2, 115.3, 115.4, 115.5, 115.6, 115.7, 115.8, 115.9, 116.0, 116.1, 116.2, 116.3, 116.4, 116.5, 116.6, 116.7, 116.8, 116.9, 117.0, 117.1, 117.2, 117.3, 117.4, 117.5, 117.6, 117.7, 117.8, 117.9, 118.0, 118.1, 118.2, 118.3, 118.4, 118.5, 118.6, 118.7, 118.8, 118.9, 119.0, 119.1, 119.2, 119.3, 119.4, 119.5, 119.6, 119.7, 119.8, 119.9, 120.0, 120.1, 120.2, 120.3, 120.4, 120.5, 120.6, 120.7, 120.8, 120.9, 121.0, 121.1, 121.2, 121.3, 121.4, 121.5, 121.6, 121.7, 121.8, 121.9, 122.0, 122.1, 122.2, 122.3, 122.4, 122.5, 122.6, 122.7, 122.8, 122.9, 123.0, 123.1, 123.2, 123.3, 123.4, 123.5, 123.6, 123.7, 123.8, 123.9, 124.0, 124.1, 124.2, 124.3, 124.4, 124.5, 124.6, 124.7, 124.8, 124.9, 125.0, 125.1, 125.2, 125.3, 125.4, 125.5, 125.6, 125.7, 125.8, 125.9, 126.0, 126.1, 126.2, 126.3, 126.4, 126.5, 126.6, 126.7, 126.8, 126.9, 127.0, 127.1, 127.2, 127.3, 127.4, 127.5, 127.6, 127.7, 127.8, 127.9, 128.0, 128.1, 128.2, 128.3, 128.4, 128.5, 128.6, 128.7, 128.8, 128.9, 129.0, 129.1, 129.2, 129.3, 129.4, 129.5, 129.6, 129.7, 129.8, 129.9, 130.0, 130.1, 130.2, 130.3, 130.4, 130.5, 130.6, 130.7, 130.8, 130.9, 131.0, 131.1, 131.2, 131.3, 131.4, 131.5, 131.6, 131.7, 131.8, 131.9, 132.0, 132.1, 132.2, 132.3, 132.4, 132.5, 132.6, 132.7, 132.8, 132.9, 133.0, 133.1, 133.2, 133.3, 133.4, 133.5, 133.6, 133.7, 133.8, 133.9, 134.0, 134.1, 134.2, 134.3, 134.4, 134.5, 134.6, 134.7, 134.8, 134.9, 135.0, 135.1, 135.2, 135.3, 135.4, 135.5, 135.6, 135.7, 135.8, 135.9, 136.0, 136.1, 136.2, 136.3, 136.4, 136.5, 136.6, 136.7, 136.8, 136.9, 137.0, 137.1, 137.2, 137.3, 137.4, 137.5, 137.6, 137.7, 137.8, 137.9, 138.0, 138.1, 138.2, 138.3, 138.4, 138.5, 138.6, 138.7, 138.8, 138.9, 139.0, 139.1, 139.2, 139.3, 139.4, 139.5, 139.6, 139.7, 139.8, 139.9, 140.0, 140.1, 140.2, 140.3, 140.4, 140.5, 140.6, 140.7, 140.8, 140.9, 141.0, 141.1, 141.2, 141.3, 141.4, 141.5, 141.6, 141.7, 141.8, 141.9, 142.0, 142.1, 142.2, 142.3, 142.4, 142.5, 142.6, 142.7, 142.8, 142.9, 143.0, 143.1, 143.2, 143.3, 143.4, 143.5, 143.6, 143.7, 143.8, 143.9, 144.0, 144.1, 144.2, 144.3, 144.4, 144.5, 144.6, 144.7, 144.8, 144.9, 145.0, 145.1, 145.2, 145.3, 145.4, 145.5, 145.6, 145.7, 145.8, 145.9, 146.0, 146.1, 146.2, 146.3, 146.4, 146.5, 146.6, 146.7, 146.8, 146.9, 147.0, 147.1, 147.2, 147.3, 147.4, 147.5, 147.6, 147.7, 147.8, 147.9, 148.0, 148.1, 148.2, 148.3, 148.4, 148.5, 148.6, 148.7, 148.8, 148.9, 149.0, 149.1, 149.2, 149.3, 149.4, 149.5, 149.6, 149.7, 149.8, 149.9, 150.0, 150.1, 150.2, 150.3, 150.4, 150.5, 150.6, 150.7, 150.8, 150.9, 151.0, 151.1, 151.2, 151.3, 151.4, 151.5, 151.6, 151.7, 151.8, 151.9, 152.0, 152.1, 152.2, 152.3, 152.4, 152.5, 152.6, 152.7, 152.8, 152.9, 153.0, 153.1, 153.2, 153.3, 153.4, 153.5, 153.6, 153.7, 153.8, 153.9, 154.0, 154.1, 154.2, 154.3, 154.4, 154.5, 154.6, 154.7, 154.8, 154.9, 155.0, 155.1, 155.2, 155.3, 155.4, 155.5, 155.6, 155.7, 155.8, 155.9, 156.0, 156.1, 156.2, 156.3, 156.4, 156.5, 156.6, 156.7, 156.8, 156.9, 157.0, 157.1, 157.2, 157.3, 157.4, 157.5, 157.6, 157.7, 157.8, 157.9, 158.0, 158.1, 158.2, 158.3, 158.4, 158.5, 158.6, 158.7, 158.8, 158.9, 159.0, 159.1, 159.2, 159.3, 159.4, 159.5, 159.6, 159.7, 159.8, 159.9, 160.0, 160.1, 160.2, 160.3, 160.4, 160.5, 160.6, 160.7, 160.8, 160.9, 161.0, 161.1, 161.2, 161.3, 161.4, 161.5, 161.6, 161.7, 161.8, 161.9, 162.0, 162.1, 162.2, 162.3, 162.4, 162.5, 162.6, 162.7, 162.8, 162.9, 163.0, 163.1, 163.2, 163.3, 163.4, 163.5, 163.6, 163.7, 163.8, 163.9, 164.0, 164.1, 164.2, 164.3, 164.4, 164.5, 164.6, 164.7, 164.8, 164.9, 165.0, 165.1, 165.2, 165.3, 165.4, 165.5, 165.6, 165.7, 165.8, 165.9, 166.0, 166.1, 166.2, 166.3, 166.4, 166.5, 166.6, 166.7, 166.8, 166.9, 167.0, 167.1, 167.2, 167.3, 167.4, 167.5, 167.6, 167.7, 167.8, 167.9, 168.0, 168.1, 168.2, 168.3, 168.4, 168.5, 168.6, 168.7, 168.8, 168.9, 169.0, 169.1, 169.2, 169.3, 169.4, 169.5, 169.6, 169.7, 169.8, 169.9, 170.0, 170.1, 170.2, 170.3, 170.4, 170.5, 170.6, 170.7, 170.8, 170.9, 171.0, 171.1, 171.2, 171.3, 171.4, 171.5, 171.6, 171.7, 171.8, 171.9, 172.0, 172.1, 172.2, 172.3, 172.4, 172.5, 172.6, 172.7, 172.8, 172.9, 173.0, 173.1, 173.2, 173.3, 173.4, 173.5, 173.

## We Attack High Software Prices



one of the latest of text it belongs to. In other words, copy can be copied as well. In PageMaker, you get one shot only — you can't even undo a mistake.

Another example is the way the two programs group files. Adobe allows objects to be grouped and ungrouped as well. In PageMaker, the Group command creates an EPS file of the selected items, substitutes it for the original, and removes the originals. Sure, it works, but it's a clear-cut recipe for a lot of trouble.

Some features that, on the surface, appear to be there aren't. For example, Adobe's PostScript language files, except that PageMaker doesn't support older versions of the driver. This could be a problem if your printer needs a ROM upgrade (in our doll tables it will print nicely from PageMaker, or if you upgrade to an application that requires the old driver).

The Adobe version of the driver contains a much more extensive list of applications known to cause problems with LaserWriter II from the Adobe-released three dies. Notably, the list mentions problems with over 10 Adobe programs, including Postcard version 2.0.1 and 3.1 and PageMaker version 4.2.

The Adobe doc cautions that Adobe Personal Tools SuperPrinter and Postscript are also known to have printing problems with it. It is a driver, so its domain is color, popular EPS and graphics files from other manufacturers. Refer to the Adobe documentation for details.

PageMaker 4.0 has an interesting feature that automatically adds the colors from imported EPS files to its own list of colors. This seems innocent enough, but, as John McWade of Adobe and other magazine told the world's first commercial users of Adobe PageMaker (except when the imported sheets of printers each containing several colors, this "feature" creates a nightmare that is an exception from his description of the problem).

Import an EPS graphic and its colors come with it. But just the color in the graphic, not any color in the file, word or text. Sure, you can copy objects, not colors, so PageMaker has been a bit confused.

For each file with any of the colors that do not have a color in the file, you take over. If a PageMaker color is matched by a printer color, it becomes available. PageMaker colors that are available become available. The resulting color count is added, other colors the printer is defined, which then leaves the color in the file added, but to be removed on its own. Import a 256-color graphic by mistake and you'll lose your lunch too. If you import a color in a different manner, it will be added on. If a color has different names in different files, you get them all. This will happen every day when you work alone.

How could it be prevented with a file object? Remember, if a color is not active at the time you imported an EPS file, PageMaker ignored it. This was not intended, but the color setting had to affect, we paid no attention. Convert the document to EPS, however, and that document color count is 256. This way, not a few colors. Pages that were saved and which we had no reason to suspect were altered by old settings and printed incorrectly. It left us no choice but to reformat,

and by one, every graphic in every color document that we had converted.

The new PageMaker files with color (in fact, it's an extraordinary color) but not all color handling (like an internal) up together in it update your color documents with color and color is fixed.

John McWade told The Computer Paper that Adobe has supplied him with beta versions of various files for this problem and especially told him that it is likely to be fixed in an update as early as May. One of the most interestingly colored Color Master is an addition that allows color in the master after importing, the color is a filter that, when an EPS graphic is placed, prevents a color from the color (Do you want the color to be added to the color palette?).

Contact Adobe at Adobe 3500 Via Vista Drive, San Jose, CA 95134.

Fortunately, there are aspects in PageMaker that are brilliant implementations. We like the program's "page imposition" capability — its ability to prepare documents for printing and binding in four pages 8.5 x 11 documents it would be printed on 11 x 17 pages with pages four and one side by side and pages two and three on the other side of the paper. Besides with more pages, of course, can be created. Why does a more word processing and DTP program include this useful feature?

Another great PageMaker feature that deserves wide exposure is its fast mapping ability. The program allows you to individualize files for color that on entering into your system, individualize can be temporary or permanent and the program maintains a database of color matching (a system developed in its file, the Adobe Postscript font matching) allowing it to make intelligent suggestions about possible substitutions. It works well — especially if you are in the habit of sharing PageMaker files between Macs and PCs. Perhaps someday, these features will make it into Windows or Macintosh system software.

Value **\*\*\*** PageMaker remains the standard in the business world. It is considered older in terms than its competitors and has many of the same features. It's a good value about \$1000 (4.0 with Adobe's upgrades are typically a one-time cost, you can open color files, but you can't save them). Also, the PC version cannot open files saved by previous editions of the Mac edition of PageMaker, and vice versa. This may require large file transfers (4.0 and 3.0) on a machine that regularly has to transfer files between PCs and Macs.

Performance **\*\*\*** Performance is good compared to version 4.2, although there are several known bugs in the 4.0 edition. Numerous postscript and trap files are available in Adobe's forum on Computers, including an update to version 4.0 of the program. In some time, a Canadian version of the 4.0 update had been posted on America Online. As mentioned above, PageMaker's handling of colors can be problematic. Like Postcard and Rich, PageMaker 4.0 is not yet a good product. Overall Rating **\*\*\*** Bugs in the 4.0 edition, its lack of support for older laser printers (it is not really different and the program is old).

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# CorelDraw Toolbox: Shortcuts To Productivity

BY J. SCOTT HAMLIN

When it comes to productivity there is just one thing to remember: the computer is faster than you. Getting the computer to do your job gives it less than a minute to finish the job because it doesn't have to think. So, a short cut is money in the bank, so here's your first deposit.

## Mighty Macros

If you're used to using a program such as WordPerfect, you already appreciate that productivity. It doesn't take long to learn many Windows users don't. Later, we'll tell you all the shortcuts available. For this example, I will use the macros I have created for CorelDraw 3.0. These macros show that CorelDraw's design ideas to copy thousands of its tools. I am constantly changing the design macros. To speed things up, I have created macros for useful design settings, such as 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1050, 1100, 1150, 1200, 1250, 1300, 1350, 1400, 1450, 1500, 1550, 1600, 1650, 1700, 1750, 1800, 1850, 1900, 1950, 2000, 2050, 2100, 2150, 2200, 2250, 2300, 2350, 2400, 2450, 2500, 2550, 2600, 2650, 2700, 2750, 2800, 2850, 2900, 2950, 3000, 3050, 3100, 3150, 3200, 3250, 3300, 3350, 3400, 3450, 3500, 3550, 3600, 3650, 3700, 3750, 3800, 3850, 3900, 3950, 4000, 4050, 4100, 4150, 4200, 4250, 4300, 4350, 4400, 4450, 4500, 4550, 4600, 4650, 4700, 4750, 4800, 4850, 4900, 4950, 5000, 5050, 5100, 5150, 5200, 5250, 5300, 5350, 5400, 5450, 5500, 5550, 5600, 5650, 5700, 5750, 5800, 5850, 5900, 5950, 6000, 6050, 6100, 6150, 6200, 6250, 6300, 6350, 6400, 6450, 6500, 6550, 6600, 6650, 6700, 6750, 6800, 6850, 6900, 6950, 7000, 7050, 7100, 7150, 7200, 7250, 7300, 7350, 7400, 7450, 7500, 7550, 7600, 7650, 7700, 7750, 7800, 7850, 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## Candidate Toolboxes

(continued)

graphics. In it, you'll have to wait for MacDraw to reload those fonts and then you'll have to open it. To not risk this, after you've used MacDraw, change the directory you're storing so one that has no graphics in it such as a /tmp directory or your /HOME/. directory. When you open MacDraw, you won't have to wait for it to bring up a bunch of fonts and fonts you can use it.

Year	1990	1991	1992	1993	1994
1990	1990	1990	1990	1990	1990
1991	1991	1991	1991	1991	1991
1992	1992	1992	1992	1992	1992
1993	1993	1993	1993	1993	1993
1994	1994	1994	1994	1994	1994

If you give some test and then change the H31 to your favorite test you'll work on that test! The fewer tests you have to alter, the better. Because I like a nice Future Mediums World for headlines and New Research for body text, I've decided again, this time by changing my H31 test's font default to 42 point Future Mediums Bold and Research text to 14 point New Research.

If you type some text and then change the text to your favorite font, you're working too hard.

**Make sure:** nothing is selected and hit **Ctrl+Alt**. Select the text and use your preferred fontface and click apply. When the Text attributes box appears, make sure that Artistic Text is the only item selected by clicking on Paragraph Text and hit **OK**. Repeat the process for Paragraph Text. For more on Paragraph Text is selected.

1554 JOURNAL OF CLIMATE

If you print multiple PDFs print to file or Postscript files for slides or transparencies, that tip is a real time saver. When printing to disk, don't print to a floppy. Instead print to a temporary directory on your hard drive and then transfer them to a disk.

If you're not using CardWare's free speed trainers such as Clones, Styles, and Examples, take the time to learn them, it'll pay off in productivity. For example, Styles lets you set hotkeys to apply certain styles instantly, so there is real speed potential there.

## Sichtings: Steven M. Johnson



**Thapsigargin** is a potent inhibitor of the  $\text{Ca}^{2+}$ -ATPase pump, which is responsible for the active transport of  $\text{Ca}^{2+}$  out of the cell. Thapsigargin is a potent inhibitor of the  $\text{Ca}^{2+}$ -ATPase pump, which is responsible for the active transport of  $\text{Ca}^{2+}$  out of the cell.

Words in brackets made wherever possible and use the interruptible display. If you are displaying several complicated objects, the last duplication will always draw first. You can save time by duplicating and clicking on the duplicate to reposition it before waiting for the screen to refresh.

Finally, we use eight levels of Trade to ensure sufficient. By using all 99 levels of Trade, your fit will not be as precise as that which translates into eight levels. ■

**A Questão 1** (Resposta: 1) **Resposta:** 1. A resposta correta é a opção 1, pois a função  $f(x) = x^2 + 2x + 1$  é uma função quadrática, cujo gráfico é uma parábola com vértice em  $(-1, 0)$ . A função  $f(x)$  é crescente em  $[-1, \infty)$  e decrescente em  $(-\infty, -1]$ . Portanto, a função  $f(x)$  é crescente em  $[-1, \infty)$  e decrescente em  $(-\infty, -1]$ .

This section on Speed and Productivity tips is a special offering of *Excel Magazine*. It is an example of the useful articles that you will find in each issue. Each article is designed to make time your productivity and increase your skills in Excel/Power.

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## Microrim Updates R:Base For DOS

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Despite the proliferation of Windows applications, there are millions of DOS-based systems still in use, and the maker of the popular debugging program E-Bug is now shipping an update to the program.

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Microsoft Inc. says software 3.5 Plus of 3 Plus is "significantly enhanced version" of the 3.5 but many features retained, and also many new features, including: new features.

Microsoft says the most significant area of improvement is speed, according to the company's test run, version 3.5 Plus

is about 100 persons taller than women in  
some nations (e.g. in Saudi Arabia) and women

Other enhancements in the new release include dynamic pop-ups in forms, updates to multiple rows, scrollable menus, more multi-row inputs and export capabilities, and expanded querying capabilities with more form.

The company has also introduced PowerGraph, a Windows-based query and charting tool that works with Relate. PowerGraph is based on Microsoft's SQL (structured query language) engine and allows users to create standard and statistical queries with a live update of the results.

Data can be selected from any table - even an attached dBase file. Queries can be sorted and displayed in a Windows spreadsheet-like grid. The user can also tailor a file view and copy it to the Windows Clipboard for insertion into other Windows applications. Additionally, the company says that queries can be saved and recalled.

These can be used in a variety of other graph types, and up to 11 columns and 12 rows of data can be graphed at once. The program will produce bar, pie, and area charts, as well as



In a variety of styles in two or three dimensions. Other graph types available are top line, big lines (bold) and high low (bars). The user can toggle between the graph and the query result spreadsheet to edit data. The changes are immediately reflected in the associated graph.

Power Graph supports all Windows fonts (including TrueType). Graphs can be exported to other Windows applications using the Windows Clipboard or by saving the graphs as a Windows Bitmap File. The program comes with a sample database on hard-disk and a custom Windows installation routine. Power Graph is available as a multi-

BlackBerry Plus has a suggested retail price of US\$799. A few cases local area network (LAN) pack is priced at US\$99. Apple's third series of iPhone has upgrade to 32 GB for US\$199. LAN upgrade and 32GB Power Mac has a suggested retail price of US\$999. For single users and 32GB for a few cases network access. [E]

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## Pen Computing?

BY JOHN MCCORMICK

1991—General purpose pen computers are based on the idea that, although every tool has its use, pen computers changed from handwriting mode and composition as typewriters did and that by all of them have now turned to using computers based on the same principle. These two moves will all now want to create that word and input data with a pen.

Even if pen computers were as accurate as a keyboard based system, you couldn't do the most important thing that people have come to rely on keyboards for — touch typing.

Most typists and experienced computer users working with a lot of text can type data at 40 to 100 words per minute without ever looking away from their reference text. That doesn't mean that most people don't type as fast as they can, but it does mean that most people don't type as fast as they can.

Handwriting — or more accurately, handwriting based computers don't work very well for that. They will require that you don't move them away from their reference text. That doesn't mean they are a good idea, so have your last touch typing class in school.

If you do want a technology to be on line to business, come again. Two years ago no computer would have been caught using a typewriter.

Typewriter style called for detaching letters and moving it to a secondary area and the typing area. Even if that took only as long as it would to do the original person to just type in his or her hand. Following 150 lines back to his or her computer, it is the last new pen computer, not a computer — but it's not for a main, good speed recognition device but it's enough to implement as a handwriting recognition.

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the other end into Parfall. Plug the AC adapter (included) into the wall outlet and the connector into Parfall. Turn it on, and voilà. Enjoy the results.

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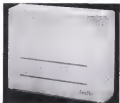
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It is compatible with CCITT Group 4 fax devices and works at up to 14400 bps. It has 16MB of buffer to store data so you can use a traditional faxing to store the pictures are all day. Previously it had been available from sources in the U.S. via ScanFax Canada Inc. in Toronto, largely selling it from late last year.

Setting up FaxPak required not a few simple operations. Unplug the printer cable from the back of my HP HP printer and stick it in the FaxPak. Then connect a second parallel cable (included with FaxPak) between the FaxPak and the printer. The driver also has a serial connector that operates at up to 19,200 bps. Toss the phone wire (included) and plug one end into the phone wall socket.

computer folders, if the computer sends a file to the printer while Acrobat is printing, the computer will get a message that the printer is not available.



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## High-end Graphics Cards Enhance Amiga

**DOI:** 10.1002/jbm.b.10768

**A**mong a custom graphics architecture that always been highly regarded by enthusiasts and professionals alike. With the introduction of the Amiga 1200 and 4000 series systems, Commodore has stepped in a new era of graphics capabilities, which made it possible for users to talk

advantage of display monitors, of better increased resolution and color.

For many, however, this advanced new design reveals a dilemma: while a thin-note design and the changing HMI it requires, offered tremendous possibilities, the prospect of investing in a new system or abandoning

Downloaded At: 11:53 11 September 2009

To address this situation, a number of developers are offering affordable graphics cards which meet or exceed the capabilities of AGP. Of these which are currently available on the market, the two which have emerged as the most prominent are the PowerVR 3.00k Expert from PowerVR and the RIVA 128 from nVidia.

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2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 2681, 2682, 2683, 2684, 2685, 26

The Spectrum includes 2 MB of on-board display memory and a 3.5in 800K软盘驱动器. Thus, providing the widest selection of making optimal use of the more advanced 80386 expansion has been added. The 80386 and 40886 series platforms form a spectrum that may even be used in one design at the same time (through the 80386/4086 device sharing technology which allows a number of chips and modules making together to provide a virtual chip). The Spectrum card is housed with a 16Mbit/s serial data port, the device interface 1920 34 pin desktop and 320 Pins. Both cards require a hard drive minimum of 3 MB RAM and require 1.84 of the 80386/4086 chips, as follows:

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Installing either the Proton II or Spectrum is a simple procedure which is well-documented on the respective product manuals. Once the system enclosure and screw-down plate are removed the boards are inserted into any vacant expansion slot and an included ISM cable is connected between the standard

## To EGS or not to EGS

While in principle I think the GDS system offers a straightforward solution which is entirely reasonable and factually pleasing, I have mixed feelings about its potential. Coarse band, often full 24-hr support, a more sophisticated back-end, and other interface options which many users will find quite useful come at a significant additional cost to the system so that it is available not only for the Spectrum but also for the 1024, but also for the Flamingo and Horizon 16 from 249. Any software writer under the GDS license may not be connected to any one of these cards, or to any card which contains the GDS software.

**Table 1**

as a requirement, rather than an extension to the existing Windows® OS-native programs (and run on the Windows® and vice versa). As a result, you end up having two environments, each of which possesses valuable resources (such as memory, hard disk space and processing power). Also, while DOS (and thus a fraction of public-domain programs) offer a good treatment to offer the DOS package in support of, there is virtually nothing available to make use of the system in the way I feel that the DOS-native programs in operating the world periodically as they have shown up in the way and with the same way. **10**

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Amiga output and the electronic window switch found on the display card.

This configuration claims that a single window will accommodate both the native Amiga display and the additional screen modes. Under this system any program window directly addresses the screen hardware (including state, gates, and image manipulation packages), will display itself back to the Amiga display hardware. Therefore



access of these two worlds will be as quick as a reflex since no var because an additional window was added to allow the two systems to exist at the same time.

Following the hardware installation, the system support software and utilities for both cards are copied to hard disk. The Commodore's standard installers program. Once the software installation is completed, you are then asked to remove your Proton or Spectrum setup by selecting a horizontal or vertical window. This window is the top right corner of your monitor. It is a small window with your data on the monitor's hardware guide to conclude that your information is appropriate for this display.

#### RTG and the Amiga

If you have attended one of Commodore's most engineering events in last September, any of the systems, you are likely encountered the acronym RTG. Simple stated, RTG (for integrated graphics) is a system which Commodore is developing for a future revision of the operating system. With RTG, you will be able to add virtually any graphics hardware to your Amiga and run it. In addition to, do as an alternative to, the native chipset. Provided that you have the appropriate support software, you will then be able to choose a graphics card according to your needs.

In the meantime, as Amiga software becomes increasingly sophisticated, a number of users are turning to third-party developers for more solutions which provide much of the same functionality as RTG. In our own discussion, perhaps the most pronounced difference between these two cards lies with the RTG programs which the Proton and Spectrum developers have pursued.

#### The Proton II

Once the actual card and necessary support software have been installed, configuring the Proton display is a completely intuitive process. Simply open your system partition, activate the installed screen mode preferences utility, and you are greeted with a number of additional Proton display modes. Now you then choose any one of these installed in your default Workbench setup. Then, call it up and you are greeted with screen 3.0 of the operating system to greater. The Proton is capable of supporting a 1024 color Workbench effectively providing you with AOS simulation.

Configuring individual applications

as well as to pursue more systems. A new mouse click, simply activate your program in your menu, world and the Proton RTG system pops up a window asking whether you would like to modify the default display mode. In this point you are given four possibilities: to change the setting to the current screen (None) to permanently set to the default display mode (Default) to use the default mode (Yes) or to prevent the option from being presented again in the future (No). Should you opt, for example to set

the default resolution of Pagesaver to 1280x1024, every time you run the program in the future it will open up according to the dimensions you have specified. And if you wish to change any of these settings at any point, to leave a command is provided which gives you the opportunity to modify any of your own defaults.

While using the card I took the opportunity to test virtually every commercial or public domain application that I could get my hands on. I am pleased to report that the

RTG system for the Proton is both elegant and virtually transparent to the user. Of these applications which operate on the Workbench desktop, the vast majority run exactly as you would expect. This includes popular mainstream like Pagesaver, Final Writer, Typewriter and Pro Calc all of which have it immediately from the standard installation and appear on the Proton.

With this card's impressive attributes, one can expect the standard fare that most users

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and color are gained at the expense of speed. In testing the Picasso in a number of design configurations ranging from a base \$2000 to \$6000-equipped \$2000 and \$4000 series systems, I found the real test to be both image and much more expensive than the \$25 and \$35 configurations. Due to large just in like Picasso's are found Miller, real scrolling and zooming redrawing 100% are especially impressive. While the system processor greatly slows the speed of the card, I was pleased to discover that even the highest resolutions were attainable on a 486DX-based machine. (This will do

double to welcome users for those people who use their design for things such as personal productivity.

#### The \$62.95/24 Spectrum

The DTV Spectrum, along with its \$25 \$49/24 counterpart, makes use of the TGS Device Independent Graphics System licensed from VIZIO's development at Germany. The TGS system comprises two parts: a Workbench module for the running system in handy software and a proprietary 24-bit desktop view command.

The Workbench module included with the TGS support software routinely manages itself with the operating system, preserving individual users' mode when it will not apply, continues directly on the Spectrum. While this extension is extremely intuitive, I found it disconcerting that the software documentation only made token mention of this feature and offered no insight into areas of compatibility with existing applications.

Through experimentation, I found the resolution to be quite consistent, apart from the odd glitch or two. Perhaps the most glori-

ous criticism, however, was the lack of a mode positioner utility to allow rotating software to take advantage of the increased display capabilities of the card. When such utilities are readily available in the public domain, one would naturally expect such a facility to be included with the card. Being able to greatly extend programs like Hyperion or Pro Page into higher resolutions is an option which many users would find indispensable.

In all of this testing, the \$25 Workbench, available on option does not offer support for diagonal screens, a feature which has become synonymous with Amiga multitasking. For the time being, the TGS system included with the Picasso II has the intended position of being the most robust solution of those currently available.

Apart from the standard Workbench TGS display extension, many users will undoubtedly find their outcomes perturbed by the custom 320x200 display. This option essentially provides an alternative graphical user interface which more closely resembles that for Unix or MS-DOS. Many features currently unavailable within the Workbench such as font selection, proportional page layouts and embedded page and non-user pages are provided in a professional, well-refined work environment. A number of TGS-specific programs are also included, ranging from screen configuration utilities and desktop management programs to the D-I-A TGS Post package.

#### Performance and Handling

In a 2000 MHz benchmark test, the Spectrum offers the advantage of supporting the advanced 3D architecture found in the 386 and 4860 series Amiga. Evidence of this feature is apparent as soon as you leave the card up and running. Of the options which I have tested on the Picasso II, the Picasso II and Picasso II Spectrum is apparently faster than most others and appears under both the Workbench and TGS desktop environments are indeed significantly more responsive than the VGA chipset.

If you intend to use the Spectrum to enhance your system for personal productivity, graphics work or platform emulation, you will find that the performance is more than adequate, even in modes which take full advantage of the increased color and refresh rates. Those that work with desktop publishing packages, spreadsheet or word processing software will find that the increased screen size. On one often will even prove difficult to do without.

Ironically, the only area where the card seems to lag is when it is operating in the 320x200 mode. In testing the card in an \$2000 system I found that the performance dropped considerably. If you are looking at the possibility of upgrading your \$2000 system with a third party graphics card, I would suggest taking a closer look at some of the optimized 320x200 boards available on the market.

#### The Final Analysis

In an overall opinion for building systems, either of these cards offers a cost-effective means of extending the life of a mature system. Having to sacrifice any of the initial investment. This will certainly be welcome news for those used discovering that the life becoming demands of their software more than justify the addition of a 32-bit graphics card. As always, however, it is up to the user to determine if a given card is a hands-on

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## Amiga Graphics Card

Continued from page 20

evaluation is one which is the most appropriate for your needs. Each card offers on-screen attributes which will appeal to different users according to their individual preferences and current hardware configuration.

The Picasso II is an exceptional value which I have found to be supported by a company which is both enthusiastic and attuned to the needs of its customers. The hardware, installation system and accessories are all of an excellent quality. The 10-bit pixel addresser must be seen to be fully appreciated. If you are looking for a 34-bit, high resolution graphics card which instantly integrates itself into your existing system, the one will prove hard to beat. The Workbench installation is superb and while the performance is limited to its Amiga II design, it will be more than enough for most purposes.

Based on this strong reputation of its developer, the GVP Systems will continue

to prove to be a strong contender among third-party graphics add-ons. While I found the included Workbench installation system to be lacking in some respects, installing applications which will take advantage of this increased resolution and color will do so with relative ease.

Others will find the innovative 100 Pin package with its opticalical data stream-alignment and photographic functions to be just what they need for the casual or professional applications. For now, the only real dilemma is deciding which of these graphics cards best suits your needs. ■

### Contacts:

Amiga II Expert Services 7099 Midland Road,  
Flowerton, NY 49441 (504) 371-6499 (404)  
382-6942 (AAX)

GVP 30/94 Spectrum, Opti Valley Products Inc.,  
450 Clark Avenue, Ring of Perfection, PA  
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Mark Pletzer lives in St. Catharines, Ontario and specializes in Amiga-related topics.

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## Microsoft Access

Continued from page 20

many users.

You cut, cut and slash data from many of the examples provided, allowing you to attempt to add a general code field from a mailing list company into your inventory file.

Those of you who have a tendency to design forms that look like they were done by Picasso with a transparent will be happy to learn that Access 2.0 comes with a form design model. The wizard will take you table and ask you which type of layout you want to apply to it, be it a single column or a grid. It then allows you to apply different styles to this layout. Options like beveled edges, enhanced shading, or plain white forms. The report wizard performs a similar function for report users.

The Query wizard and expression builders have been improved. How you can easily get from functions to find things like "top 10 sales people in Atlanta" without picking up the manual. You can then perform mail merges with the query and link them right into an event calendar inside your word processor.

You can manipulate the tables in D0 to add queries, forms and other elements. This allows you to get at the function you want

quickly without writing a macro or defining functions or forms.

You can now link fields within your tables. This is handy when you want to include viewing some data without having to go to the end of your grid or performing a query.

Moving data from one table into a new table is now a breeze. Before you realize I randomly select different records and fields from your table. Now you simply drag and drop items into your word document.

Access seems to be a very well-accepted product for people who don't have the skills or time to learn an alias for other language or for those who need to quickly develop simple-use windows database applications.

Unfortunately, in C40 it is a pretty big pile of data. But it will certainly pay its debt in development time — the overall design concept and results make an incredible difference when compared to mailing lists available with a costly professionally-designed package.

For those of you who have some sort of database already, Microsoft offers a new price product upgrade for a more C40, very tempting for making that jump from a C40-based database to Windows. ■

## Pagestream 3 For Amiga Coming

Soft-Logix is impatient on the verge of releasing Pagestream 3 for the Amiga.

Elvis Kestemont of Soft-Logix Marketing recently confirmed that the Amiga version of Pagestream 3 would probably be ready for release by the time you read this, and that the deci-

sion to release an Amal version of the upgrade would be made at that time.

Contact: Soft-Logix Corp. 1-800-629-8658 or 314-494-8608

From: STN Drivel March 04 1994  
Mo 1010









## what's new

### Free Math Software for Parents

A start-up Toronto-based software company is offering free copies of its MathFlow software to parents willing to participate in an introductory program. MathFlow is a Macintosh program designed to provide a child, resident and relative assessment of a child's performance in math. MathFlow is capable of having the mathematical abilities of children ranging from kindergarten-age to those in Grade 6.

In order to get an accurate database on the mathematical skills of Canadian school children, Plotwell has a special offer to get this database started. Plotwell is giving away copies of MathFlow to the first 1,000 parents with children who meet the age criteria. Plotwell's President Brian MacBain says that all parents have to do is to "agree to send us their results on disk or by e-mail within six days" of receiving the program. There is also a small fee (\$6.95) to cover postage and handling. The offer expires March 31, 1994.

Contact: Plotwell Inc. (416) 660-8811 (toll-free)  
Apple Inc. FWS/030PT

### Design Your Own Circuit Boards

Have you ever had the feeling you could design a better computer? If you have the necessary background electronics you can now have the power to design printed circuit boards to suit your needs.

#### Post-it

Designed for convenience — as well as add convenience and security to — your Post-It® is offering custom-printed Post-It®s (printed labels). The company will provide the leader with information about the product, such as company name, address and phone number.



The Post-It® Universal notes featured 11.5 inches by five inches and is made of recycled paper. DM says it considers the separate promotional sheet as a company can send money on paper and long-distance phone calls.

Illustration order for the custom Post-It®s can be made in 20 days.

Contact: DM Promotional Materials (800-421-3800)

RAM Inc. has introduced a printed circuit board design program that is easy to use yet maintains the power and flexibility of computer packages, and for a fraction of the price. The program can create the schematic design output produced from AMI's I2-Lingo

program. I2-Route Pro then uses the schematic to generate a graphic of the printed circuit board with all of the necessary component parts and traces on it. A printed circuit manufacturer can then take the information generated by the program and use it

to make new circuit boards. I2-Route is available in DOS and Windows versions for \$975.

Contact: Ramco Ltd. (916) 480-7670

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## what's new

## HP Drops OmniBook Price

Hendel/Stanford (Toronto) Ltd. has reduced the price of the Commodore 64 computer.

and models in *The Computer Paper*) and introduced another model called the **Grasshopper** (46).

The new 438 model puts EXC and Win-down on the hard drive (the 411 had them in RAM). Both EXC and WIN-UP capacity hard drive are available on the model 438.

1000 10000 100000 1000000 10000000 100000000 1000000000

The Chevrolet 435's new suggested price is \$2,799 with a 4000 (base) drive and 12,000 with a 3000 (base) drive.

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

## QMedia Updates Authoring Tools

©Mads Software Corp. In Vancouver we released version 2.0 of its mailboxes software without ©Mads in the code.

Version 1.0 now supports object loading and unloading (XML) and allows hypertext browsing. This means a multimedia author can link any video, sound, text or graphic object to something else. Then when the user clicks on the object, the presentation branches to the appropriate segment. The hypertext supports describing to other parts of the presentation links to external programs, instead of embedded objects, so the structure of HTML exams.

The program is available on diskette, but also comes on CD-ROM packaged with two Clips M, which feature MOORE of video music, animation background and graphic images. The CD-ROM version has a suggested price of \$39.

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## Alchemy Anyone?



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the old Main Street.

Shiloh's Spanish baroque 120 symbols, plus an interpretive guide. Castles is Shiloh's place upper case letters while a cattle silhouette and

within shape shapes. Primitives are subdivided in inner shapes and outer shapes without borders are also included.

The Advisory Committee and Children in Ministry will be EMB's main

Florida says dealers negotiating are working for new interested customers (407-490-1111) for customer details.

11/20/2009 11:20:00 AM

## Making Signs On The Amiga

Laurel Creek (Wetland) of C. propinqua, CPH has a subpopulation near and to the Laurel Creek.

The Signaprinter works with an Amdac drawing program and uses existing Compugraphics or Aldus Type 1 fonts. The engine controls a variety of raster and screen printing stencil writers as well as Hermes Variguard engraving machines. Signaprinter sells for \$12,500. □

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SELECTED SYSTEMS	MODEL-01 w/128K cache	MODEL-02 w/256K cache	MODEL-03 w/512K cache	MODEL-04 w/1MB cache	MODEL-05 w/2MB cache
SBS	486	375MHz 133MHz + Pentium socket	375MHz 133MHz + Pentium socket	375MHz 133MHz + Pentium socket	375MHz 133MHz + Pentium socket
MEMORY	4MB, max 32MB	4MB, max 32MB	4MB, max 32MB	4MB, max 32MB	4MB, max 32MB
HD HARD DRIVE	100MB w/20MB	333MB w/60MB	333MB w/60MB	333MB w/60MB	333MB w/60MB
MT 17" VGA MONITOR 5.25"	\$1279	\$1999	\$1759	\$1999	\$3309

100 MHz video card, 100 enhanced keyboard mouse, 1 2MB 5.25" & 1 4MB 5.25" floppy disk drives, and base unit. 1000 hours warranty. PowerLite 4000s monitor, 17" 1000x600, 1000 hours warranty, 1000 hours warranty, 1000 hours warranty.

## References

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## Attention Hockey Fans

Quadrangle Software has something for you. Playing sports fans. Carrying the name of Lights Out Sports Fans. National Hockey League Screen Series. The software joins the previously released Major League Baseball screen series as the next module in the Lights Out line. International Lights Out modules will be released throughout 1994.

The company claims that Lights Out NHL, at the only National Hockey League Properties Inc., licensed screen series on the market. This program features authentic team logos, sport related sounds and 100 different

team customizable "Game Plans."

Lights Out NHL takes up only 2 MB of hard disk space and requires minimal power to run. Although the program has the most graphically intense screen series in the series, a company spokesperson maintains that it builds the image of saving your money, your storage space and our environment.

Although the program lists for \$49.95, and Canadian! Canadians may purchase the software through the 800 number for 340 Canadian.

Contact Quadrangle Software at 800-220-0207

## Free-Net Seeking Sponsors

The Toronto Free-Net has launched a campaign to attract sponsors for its telephone line. Toronto Free-Net maintains a web site around 24-hour lines during the first five years of operation to serve residents of Metro Toronto.

The Computer Paper and Toronto Computer are among the first corporations to come forward and will be sponsoring two lines. They encourage other companies to join in. The site is approximately \$450 per year per line and sponsor will receive one line recognition of their sponsorship in the form of a customized message.

Logan Haywood Securities, a division of Rogers Communications Inc. has joined \$4500 to help this support area. This was the first to join. The MTS network has donated approximately 4000 hours of computer equipment. Ryerson Polytechnic University Library is also supporting the line as a charity sponsor.

The Toronto Free-Net is modeled after similar projects in Ottawa and Toronto and expects 15,000 users in the first year of operation.

Contact: Toronto Free-Net, 530-555-5555

## Reach Out And Touch — Everyone

The 410, 800 of Marlborough 410 has introduced Canada Phone, and claims it is the first CD-ROM containing white pages for top covering every city in Canada.

Canada Phone contains nearly 10 million

list listings derived from every white and yellow page directory published in Canada, with the company. Access to the listing is accomplished through the CD's software interface. Listings are by searched by name, address, telephone number or type of business.

Users can explore listings in a hard drive or send them to a printer, and the program will automatically dial a highlighted listing.

Canada Phone has a suggested retail price of \$34.95 and no restriction on personal usage.

Canada Phone is currently available directly from the CD-ROM by the company expects it to be selling in software stores where distribution agreements are arranged. These require a minimum of a 386 PC with 4MB of RAM, Windows 3.1 and a CD-ROM drive.

Contact: ProSoft, 800-888-8888

## Seven Commodore Released

MAXIMUM 100 — 3D Microcomputer has introduced seven new Commodore personal computers. The systems are priced approximately ranging from the C640-483 at \$11.99 to the C640-800 at \$2,499.

3D Micro signed an agreement with Commodore Business Machines Inc. in December 1993 to manufacture and distribute Commodore 640-compatible equipment and to market the system to two general store customers in Canada. The new systems replace all current Commodore 640-compatible configurations and are available immediately.

Two of the new systems, the 4000MC

## Multimedia Kiosk

TEA, EARL, BATH, HOT and maybe to see you as advanced as the system in the kitchen and it will provide menu suggestions and print and receipt for drinks and are available for



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Contact: Multiple Images Inc., 416-597-1646





# newsbytes

EXCLUSIVE NEWS

can for the most desirable display and use a utility system either to program any tape files.

The company says that since work — making and writing all messages — is done while you are offline, you can have it sent, must an average cost of \$25 per month although the daily online service is \$15 to run up your charges if you aren't careful. The WorldNet access price is \$6.00 with a monthly minimum of \$17.95. The company offers access through 800 numbers to some areas of North America. US 800 numbers start at the standard rate plus \$3.00 per minute during evening hours and \$0.00 per minute during the business day. In Canada rates are \$0.50 and \$0.40 for night and day rates respectively.

Contact: Computer Information Inc., 604-666-8800; fax 604-666-8500.

## Quarterdeck Licenses Mosaic

SANTA MONICA, CA — Quarterdeck has been awarded the first commercial worldwide license of Mosaic license: a multiplatform document viewing and navigating solution for Internet developed by the National Center for Supercomputing Applications (University of Illinois, Urbana-Champaign).

Quarterdeck adds Mosaic to their other supercomputing 32-bit software that includes Hyper-X and IntelliWin Windows. Integrated software even covers networking.

Robert Quarterdeck is quoted in "Newsbytes" as wanting to take Mosaic out of the academic to legal and develop a commercial user.

Quarterdeck will also use Mosaic to provide companies with tools to create multimedia documents and information services.

In March of 1994, Quarterdeck will be releasing version 2.0 of DESQview, a cross-platform windowing software with enhanced graphics and new performance improvements.

Contact: Quarterdeck Office Systems Inc. 710-962-6801; fax 710-314-4217.

## Microsoft To Buy Softimage

REDMOND, WA. — Microsoft Corp. says it will spend \$100 million to acquire Softimage, a Montreal-based computer animation and visualization software company.

Microsoft said that the boards of directors of both firms have already approved the purchase of Softimage Inc. for \$100 million in Microsoft stock. All that remains is the approval of the Softimage shareholders.

The deal gives Microsoft's Edge position in the two- and three-dimensional world of animation used by film studios, animal simulators, graphics artists, product designers.

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# newsbytes

EXCLUSIVE NEWS

and engineers

Microsoft spokesperson Lisa McKenzie told *Newsbytes*, software tools were used to create the document extension in the popular movie "Jurassic Park" as well as music

refrains produced by the rock group "Def Leppard."

Software sells lots of authoring tools. Its products are high end, with prices starting at \$4,000 for software that allows the user to

write animation programs. Autodesk said software will remain in Microsoft's control, but it may be sold to third parties and will continue to be led by Autodesk's founder and Chairman Daniel Langlois. Langlois will

report the Chief Executive in the month's Advanced Computer Technical Group.

Contact: Microsoft, 200-800-0000 or 408-406-0000.

FEDERAL GOVT MISO  
88VAN-2-0029 16

## Compaq, Thanks for Playing

Spec	Dataproducts LZR 3080	Compaq Pageman	Q Q 75	Q Q 40/55
Currently in production	YES	NO		YES
Engine speed	20/PPM	20/PPM	7M	17 PPM
Handles up to 14 1/2" paper sizes	YES	YES	5	NO
3 paper cassette	YES	YES	5.5	NO
800 x 600 dpi PostScript resolution	YES		NO	NO
PostScript/Group 3 compatible fax option	YES	YES	5.5	NO
Virtual Printer Technology	YES	NO	5C	NO

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## Electronic Arts Buys Broderbund

SAN MATEO, CA — Electronic Arts (EA) has announced it will purchase Broderbund Software in a merger valued at \$400 million. A publisher of educational software, EA is probably best known for its SimCity's involvement in the new 3D0 Interactive Multiplex, while Broderbund publishes educational and entertainment software aimed mainly at children.

EA approached Broderbund about a merger last year, according to Broderbund officials. The two companies had already been working together for over a year, as EA had been handling Broderbund's international distribution. Broderbund's international division, Broderbund International, had EA's international distribution and the multiplexes' development were the main attraction for the merger while Broderbund's strength in the educational software market interested EA.

## STS SmartLook Customizes Reports

MINNETONKA — STS Systems Inc. claims its SmartLook software saves pages and the time of information systems staff by letting people share reports from multiple systems via their personal computers.

SmartLook runs on PCs equipped with Microsoft Corp.'s Windows software. It takes data from multiple sources and creates online reports following specifications created by information systems staff. Then, and users can read the reports on their computer systems, and they can manipulate and customize the data to suit their needs without affecting the integrity of the original DB table.

The software is also meant to make it easy to provide the same report to a group of people. A spreadsheet for STS told firms, for example, it can be used in meetings where everyone has a personal computer, so that participants are all looking at the same data at the same time, the user.

SmartLook has three modules, all of which run on the personal computer, the spokeswoman said. The Editor is used to create report templates, the Assistant takes downloaded data from the database and indexes it, and the SmartLook Reader, which is the only module needed on every end user PC, lets users page through the report and choose from a selection of views.

The software has a list price of \$4,995 for the base system, which includes the Editor, Translator, and one Reader. Additional readers are \$175, with quantity discounts.

Contact: SmartLook, 1-800-517-8338.

# newsbytes

EXCLUSIVE NEWS

## Canadian Computer Industry Grows

TORONTO — Despite further slowdown in the large- and medium-scale systems markets, the Canadian information technology industry grew 3.7 percent overall in 1993, according to International Data Corp. (IDC).

IDC expects growth to remain stable or above that rate for some time through 1995. According to the research firm's figures, the value of last year's sales of C\$36.5 billion in 1993.

The hardware computer market continues a slide that has been going on for several years. In 1993, large-scale systems sales in Canada shrank 13.4 percent to C\$840 million, IDC said.

The medium- and small-systems market shrank 14.7 percent in 1993 to C\$794 million. IDC said. The small-scale systems market—by which IDC means small multi-user computers and not single-user PCs and workstations—grew 2.1 percent to C\$730 million.

The single user system market grew 3.5 percent to C\$4,243 million in 1993, and IDC expects it to reach C\$5,000 million by 1995, when it will account for 58.1 percent of the total hardware market.



software and the shop-and-keep copying tool can allow the image to be manipulated into other applications. The download is access enabled by plugging a serial cable into a port on a modest pen.

Apple has seen a large customer base of portrait-oriented professionals, graphic artists and photographers who look for more control, flexibility in image processing, color image acquisition, 100 exposure images in color, 150 to 240 to 400 to 480 pixels and can take up to 32 standard resolutions (images in eight high-resolution images). The QuickTake 100, including Apple's PhotoFlash picture editing software, is expected to sell for under \$1,200. A Windows version is scheduled for world wide release in June, 1994.

Contact: Apple Computer Inc., 406.674.0118

## NEC Develops 500 MHz RISC Chip

TORONTO — NEC says it has developed a powerful RISC (reduced instruction set computer) chip, which operates at 500 megahertz (MHz) and a very low-energy consumption rate.

NEC claims that it is the world's fastest RISC chip. It is a 32-bit processor, which is based on CMOS (complementary metal-oxide semiconductor) and eight-level pipeline technologies. The two technologies reported to allow for a powerful parallel processing feature which uses less power. The company claims that the RISC chip consumes only one-tenth of the power of existing RISC chips.

The RISC chip is still in the prototype stage. It has a cache memory of 180 words (million instructions per second). NEC says it is possible to increase this cache memory to 320 words.

## Apple Intros Digital Camera

Apple Computer Inc. has announced QuickTake 100, a digital still camera which downloads to video Macintosh or Windows-enabled computers. The company has also introduced the Color Digitizerizer Pro, a color tablet printer for the iMac.

According to Apple, the camera is light weight with built-in automatic features and a built-in flash. QuickTake 100 is designed to be a point-and-shoot camera. Users photograph whatever they wish, download the images into the computer using QuickTake

## Prodigy, Southam Eye Canadian Service

TORONTO — Prodigy Services Co. and Southern Inc. said they are studying the idea for an on-line service in Canada. The joint effort could lead to the creation of a Canadian counterpart to Prodigy's information service in the United States.

Prodigy of White Plains, New York, is a joint venture of IBM and Sears. It is an on-line service of the same name some of the largest in the United States. Southern is a Toronto-based publisher of daily newspapers and their magazines, which also has interests in electronic publishing and media news.

The companies are giving out few details of their plan, reportedly that they are planning to evaluate economic markets desired by on-line services in Canada, with a study starting immediately. Other Canadian companies are believed to join in the project, they said.

Larry Hefley, a spokesman for Prodigy said, "We believe that these developments will depend on the success of the study through the end of the month. A 'very good fit' for some sort of partnership offering. 'The long question is going to be content.'"

## Computer Almanac Now On CD

ENCLOSURE: WILLIAMS, RT — The Computer Almanac, recognized by the 1993 Canadian Computer Awards as the "Best New Product," is now available on CD-ROM.

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EXCLUSIVE NEWS

technological changes were taking place will fundamentally alter the way we do business in the future.

■ 74 percent of Canadian society will see more changes in the next two years than in the last 10.

■ 60 percent believed technology has improved the quality of life for the average Canadian.

■ 60 percent agreed that most businesses and governments have not yet fully realized the economic potential of the information highways.

## Intel Top Dog

SAN JOSE, CA — Intel is the dominant supplier at the worldwide microprocessor market in 1993 with 74 percent of the world-wide market share, up from 69 percent according to market research firm Dataquest. Intel's processors, including the 486 family and the Pentium, are the leader of the vast majority of IBM-compatible personal computers (PCs) on the market today.



top on its exponential growth by supplying 486 desktops as well. Dataquest adds:

Contact: Dataquest 408-427-6442 or 408-427-0280.

## Unitel Skips Alberta

EDMONTON — Unitel Communications Inc. has announced that it will not make long-distance telephone service generally available in the province of Alberta. The company, which competes in long distance with regional telephone companies in eight provinces, said it cannot make money in Alberta because of the terms under which inter-exchange would allow it to enter the market.

Unitel will offer long-distance service to the Alberta offices of large corporations that use its long-distance services as a life insurance policy. But will not serve local businesses or residential customers.

"We can't pay for the privilege of offering service to a market," Unitel spokeswoman Stephanie VanKerkhof told Newsbytes.

The loss is the amount Unitel has to pay to AET Ltd., the company that provides local and long-distance telephone service to Alberta and to Edmonton Telephones, an independent phone company serving the city of Edmonton.

The Canadian Radio-Television and

Telecommunications Commission (CRTC) set conditions that Unitel must pay to each regional telephone company to help support local phone service. The payments are higher in Alberta than in other provinces, and higher again in Edmonton because Unitel would have to pay Edmonton Telephones as well as AET for access to the city. ■

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## VPU Halls Ventura Users

Ventura Publisher Users (VPU) is a non-profit user group, in contact of people who have an interest in Corel Ventura Publisher. Ventura Publishers, and other applications that work with their products.

VPU is based in the US but has a worldwide membership. New members from any country are welcome, and VPU benefits from the exchange of information and experience from our widespread membership.

Founded in 1994, the group is run by a volunteer and board of directors who are elected annually. The provide a range of services that include a magazine called TACline, regular meetings, Maxline-to-maxline tips and notes, some technical support, a range of useful software utilities, and occasional publicizing of interest to Corel Ventura users. We also maintain an up-to-date web site of features that we can send you to see in future releases of Ventura.

TACline is published 10 times a year and distributed to our members worldwide. It contains regular features on Games and Games, News and Tips, Typelines, Copyediting, News and Views as well as interesting reviews of Ventura related products. The best way to find out about TACline is to send in:

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## bookreview

## War Stories Add Flavor To PC Chronicle

BY JOHN MCCORMICK

**Title:** *And Here's Victory at the Personal Computer*  
**From:** David Levine Press, 22 Mainline Road  
 Associates, North Gwynedd, PA 19061  
 (215) 682-8515

**By:** Steve Ford (ISBN 1-5588-002-7)  
**Editor:** Ed Hildebrand (ISBN 0-894-91040-0)  
**Rating:** A for a solid 1-hour to 4-hour

**D**id you ever wonder how the personal computer industry got started, what it was like trying to buy a computer in

the early days, and how people coped with finding the parts and information they needed?

If so, Steve's letter to Brian from then, Steve Ford, the man who gave Steve Jobs and his partner "Pete" a place in his booth at the world's first and computer show (August 27, 1976 Atlantic City, New Jersey).

Although Steve doesn't claim to be the best businessman in the world (he once named himself a 10 percent owner of Apple Computers for \$10,000), he was certainly a pioneer and knows where all the dangers are hidden.

Yes, while this book does offer a revealing glimpse into some of the personalities and intrigues of the early personal computer industry, it also provides a vital look at the how the industry developed, if not from comfort, then certainly from the time it was in danger.

Steve eventually left the computer sales scene for publishing, but during his time as operator of New York's Computer Mart (which was actually owned by his only then once shipped cattle on long live device by joining a computer monitor to the window of his store. He did this along with stories of at least one more, with others in this very interesting book).

Based on the long-running column he wrote in Computer Shopper, Steve Ford's story not only brings much of that information into one easily accessible source, but also regards on many of the subjects covered in the column.

Whether you lived through the PC revolution (as I did) or are just getting involved in computers and want to understand how they developed the way they have, Steve's book provides a unique look at the people and hardware that have shaped the highly polished multi billion dollar industry we see today.

On a personal note, I have known and worked with Steve for years and have great respect for his knowledge of this industry. I thank him for sharing his experiences, both good and bad, with the rest of us in this book. ■

**Sightings:** Steven M. Johnson



The rapid introduction of the "Apple Group" is a testament to the rapid growth of the computer industry. The photo depicts the group of people at the Apple Group.

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**Title:** Newton's Law: 4 Super Windows Store  
**Author:** Andrew Goss and Keith Roberts  
**Publisher:** Random House Books  
**Price:** \$20.95 (Suggested Retail) \$19.95

According to Newton's Law, the typical "Newton user" is likely to be male, roughly 34 years old, an executive earning roughly \$30,000 U.S. a year, and use a personal computer.

The fact is that comparing considering the current rules and capabilities of Apple's Newton. What is surprising is that this point is made in a book which is definitely not meant specifically at the "mass and untrained." This very "big" book (which depends with writing and the Text editor) will probably not appeal much to those beginning users of the Newton. There's a shame, because this is probably one of the best books on its subject to be found.

## bookreview Nomad's Guide Provides Newton ABCs

BY KEITH SCHENCKLE-BOISVERT

There are several good things about this book to recommend it. The first is that it does not use Apple's corporate lingo. It is up-to-date with its criticism and makes a point of showing both its weaknesses and its strengths compared to other Personal Digital Assistants (PDAs). Most books of this type only give you the "how to" aspects on using your machine — without — how you do it learn much. This book gives you plenty of information.

**The best thing about this book is the way the authors hint at the potential of devices like the Newton for the nomads in spirit.**

Another one, how and why the Newton works is explained in a technically technical language that is not only technical. You can also find your own point in making this book, it is written as a series of word about of your increasing complexity, so when you realize one problem you can move on to the next. In a lower portion, both authors have also published their local address or readers (in context) there and ask about related information.

The best thing about this book is the way

the writers hint at the potential of devices like the Newton for the nomads in spirit. Just as the original Macintosh expanded the way people used their computers, the Newton will likely do the same whenever they become more affordable and come with more features. This well-written and often humorous book on the Newton works as a great companion guide for those who want to compare on the go.

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book review

## Read This For Free Stuff

[illegible]

**Title:** Computer Profiles (and) About Hardware  
**Author:** Tony Hogg  
**Publisher:** Syntex Inc. 1992 100pg. (4-10 000)  
ISBN# 0-9373-0396-0

brothers you can request are even named. There is also a list of the phone numbers (also known) for hundreds of other computer brethren. Toronto.

Since a major source of computer hardware and the thousands of computer installation and upgrades appeared by corporations to provide support and by individuals as a hobby or as a business, there are chapters on getting a machine (this time, of course) and how to use it with communications software (which you also get for free) to download software and the "buy and sell" forum and good "wanted" ads. The book also explains how to set up your own BBS so people can actually send you e-mail (see download).

**M**any of us dream of getting something for nothing — the proverbial “free lunch.” Usually it revolves just a dream — nobody gives away anything worth having this close to Christmas!

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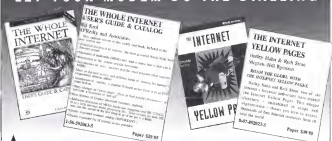
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To get you started on the business tool the team also provides lists of phone numbers, e-mail and Web site lists of commercial software and hardware manufacturers and potential sources of investors. (See table on the opposite page.)

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Dr. Wayne R. Cragg, Computer Consultant, Providence, Rhode Island, Providence, Rhode Island

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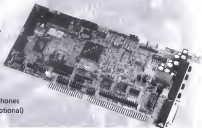
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**3** If you need specialist software and can't afford a custom solution, search your industry's trade publication for specialty business software. Often purchases already from the author, and it often includes better support and less expensive customisation. If you need it, look again viewing a demo version of any specialty package. Because you can't always get a refund if it doesn't perform as expected. Public domain and shareware packages exist for everything from bookkeeping and filing systems to restaurants, body shops and dentists. Quality ranges from simply to astonishing, and it is a mine in your modest computer.

The sharing software fanatics you wish to meet have identified it and will focus it, reduce your training time, and it allows downlead in better training domains. Consultants who deliver software have always said what the latest packages can do.

**4** Network with colleagues and compete costs to find out what they're doing. Have it sent, and what else is "going digital"? Good information helps everyone and could purchasing power might lead to a big price break on standard or specialty software.

**5** Work with (contact) your business in a new way to save money you can save as already computer literate. It's like switching from a laptop to a PC. It takes time and money, but because the increased power and responsibility (largely an unpaid responsibility) assigned as a person work in your share from your hand with an industry. Hardware reliability is improving but still computers in particular are the use of them in retail stores as one can find if you believe software is long term. You can't find you in a word file.

**6** The training period will be much less overall for everyone if you keep some administrative software on the company system during training. A low-cost and easy will cost training with one teaching with less time. The results of the training for a number of new users of the system for hours of time, one on one training, and most employees will take "play" training on their own time.

**7** Absorb any system that you can use. You will live up to the work to do in your environment. The computer is a slow learning device but the faster it learns from a book to the day if you don't have plans for that time and then don't get to follow through the computer will still be too slow for you.

**8** Automate every phase that can be automated as early as possible. It involves first both programming, software development and configuration skills are sometimes needed, and 12 months of setup in business setting can save you several times a year. Every operating system has its own way to look in books for automating every thing from daily backup and printing to project control and applications control.

Review of overviews on automation through. One-to-one operation is slow, but every business needs at least one employee who knows the basics of the operating sys-

tem. Small, immediate errors in Windows or DOS could literally cripple this business and the smallest errors. Many problems can be handled in seconds and for too, by someone who understands the system. There are manual file drawers and public domain systems for teaching the basics of DOS, Novell Netware, Windows, WordPerfect and other systems, and inexpensive manuals courses covering a variety of many popular business programs.

**9** Avoid all in manual software like the plague. Problems with data compatibility could make major conversion headaches if your software becomes too limiting. The responsibility may not always be resolved by the power of the computer. Data control on the public version of Windows may pose accounting package with one important point for high and volume. If a program won't export Lotus, dBase, Word, WordPerfect, Bookworks or ASCII data more common than the industry does not.

**10** No single package does everything, but the right combination can work. Selects. Most small businesses need several programs, not just one and "multiple" systems are the worst of the worst. You can save and make several investments to do specific jobs, often the function of the price of a single-function program. Study level programs for bookkeeping, sales, printing, planning and appointment scheduling. Do not do absolutely fine for the IBM computer.

**11** If you only need basic accounting, choosing to use management software with a dealer who only sells small businesses. Most management software has no database, can spreadsheet and the accounting package, and that it is expensive without the industry is widespread and growing with every new software release.

There's no substitute for a fast drive if you can't back down a demo version or as slow as the time it takes to follow through the support if no demo version. Any small who really wants your business will stock current demo and let you examine the material before buying, even if it means opening up a brand new package. But not many smaller businesses this level of commitment to small business.

**12** If you have not work to other firms, you have not that you can find to replace. If you give a customer will provide you accounting, printer, and any other who makes your operations with data in their personal files. It can save you money and improve relations with colleagues in their files.

**13** Keep in mind that the most part of computerising a small business is setup and testing. Unless a human error that's proven to be a unit. Personality studies and communication problems with people should will have what could be an exciting adventure into an extraordinary world.

Call Les works in learning, 402 on a computer computer. Involvement, take and efficiency, get the individuals and better equipped business. Please for several days and evenings at (416) 298-9415.

## A Most Bogus Fix For QuarkXPress

Q: When I put a TIFF from QuarkXPress images on a white background print with aged edges, I discovered that the way to get rid of aged TIFFs in XPress was to fill the background with white.

This is fine if the background is white, however, not so good when the background is another color. For example, if I am working on a page that has blue TIFFs with a grained blue background, the MacRuler will print blue borders. The blue lines greatly with jagged borders.

The only solution I can think of is to print the black lines and then replace the TIFF picture elements in the modify the layer box while printing the blue lines. There are several lines the grained blue of manually cutting the borders out of the blue layer. Of course this would not be a solution at all if I was printing blue TIFFs on a grained black background.

Any suggestions? Please don't solve this!

A: Even the editors in EPS with a "clipping paths" using Adobe Photoshop as a similar program. Pages but it works.

— G



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